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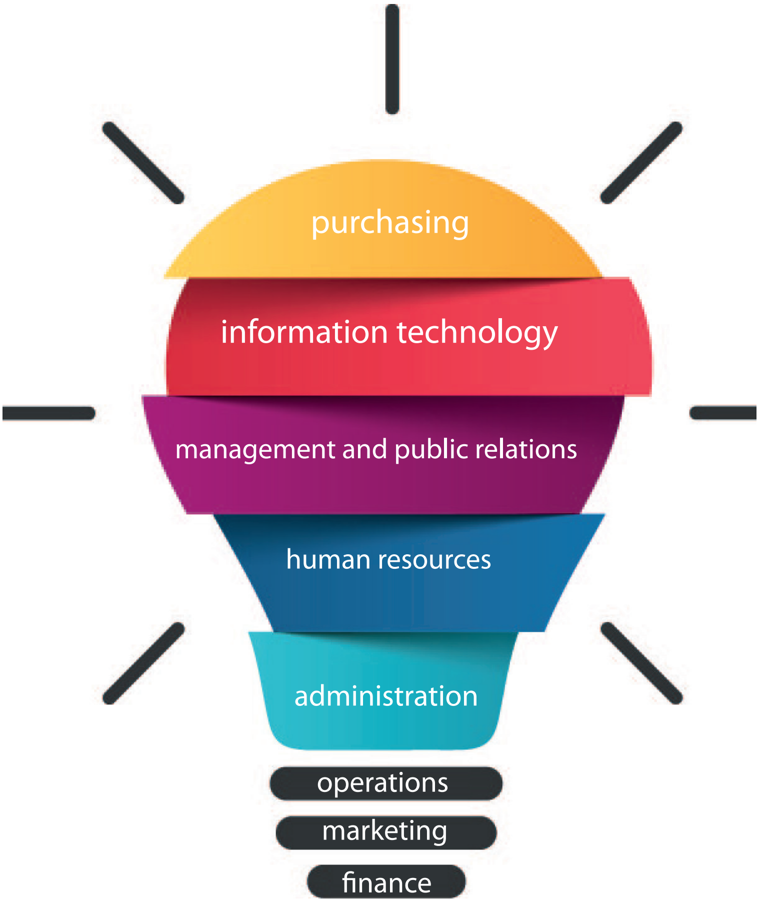
BUSINESS MANAGEMENT FOR ENTREPRENEURS

3rd edition



Editor: Cecile Nieuwenhuizen

Business Management for Entrepreneurs

Third Edition

Prof C Nieuwenhuizen (Editor)

JA Badenhorst-Weiss, MC Cant, AA de Beer, EJ Ferreira,
D Groenewald, DG Mabasa, RT Mpofu, RJ Steenkamp

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Contents

Preface

A small business is not merely a small big business. Small businesses have their own requirements and objectives that are quite distinct from those of large organisations. In this book we introduce entrepreneurs and business managers of small and medium-sized businesses to all the functions that are essential for managing these businesses successfully. These functions include the management function and seven additional functions: finance, marketing, operations management, purchasing and the supply chain, human resources, information management and public relations.

In the establishment phase of a business, the entrepreneur often takes responsibility for all or most of the business functions in addition to the management function of the start-up business. As the business grows and expands, some or all of the functions become the responsibility of other employees or heads of departments. However, the entrepreneur remains involved in and informed about all the business functions to ensure continued performance of the business.

Although entrepreneurs usually start off with a small business, it is important for most entrepreneurs to grow and develop their businesses into medium-sized and large businesses, and they work intensely to achieve this goal. Others are satisfied to keep their businesses small, but manage them entrepreneurially by doing new, innovative things.

The emphasis on the various functions may differ according to the type of business. For example, a retail business might be more market-oriented, while a manufacturing business will be more operations-oriented. Nevertheless, a decision about marketing, for example, will inevitably have a specific effect on functions like finance and operations, while influencing the remaining functions collectively in such a way that the business achieves its main objectives.

In this book we introduce you to the functions and what they comprise, and provide basic guidelines on how to manage each function effectively without losing sight of their influence on the other functions.

Business Management for Entrepreneurs has been written specifically for the South African market, with relevant case studies and examples of businesses in an African context. We wish you every success with your business.

Professor Cecile Nieuwenhuizen
2015

About the authors

Editor & Chapter 1

Professor Cecile Nieuwenhuizen is head of the Department of Business Management at the University of Johannesburg (UJ). She has written several books and articles in journals on entrepreneurship and business management. Cecile is the coordinating editor of Juta's Entrepreneurship series.

Chapter 2

Andreas de Beer is a senior lecturer in the Department of Business Management at the University of South Africa (Unisa). He has co-authored other books on management and business management and has presented various papers at national and international conferences.

Chapter 3

Professor Raphael T Mpofu is the vice dean of the School of Management Sciences at Unisa. He has contributed to a number of books on finance and has presented and published several papers and articles on finance and management.

Dumisani G Mabasa has been a lecturer in business management at the College of Economics and Management Sciences at the University of South Africa (Unisa) since 2011. He has co-authored chapters on financial and credit management and has presented a paper at an international conference.

Chapters 4 & 9

Professor Mike Cant has been a lecturer at the University of South Africa (Unisa) for 21 years and is currently a professor in the Department of Marketing and Retail Management. He is also editor of the *International Retail and Marketing Review*. Mike has been editor and author of a number of marketing textbooks and also has his own marketing consulting company.

Chapter 5

Professor Rigard J Steenkamp is a professor in Operations Management at the University of South Africa's Department of Business Management. He has written several books and articles on operations management and has received various awards related to research and entrepreneurship.

Chapter 6

Professor Hannie Badenhorst-Weiss has been professor of purchasing and supply chain management at the University of South Africa (Unisa) since 1988. She is co-editor and co-author of many books on the subject and, in 2004, introduced a new BCom degree in strategic supply management at Unisa.

Chapter 7

Professor Edmund Ferreira has been lecturing in the field of business management at Technikon SA and the University of South Africa (Unisa) for the past 21 years. He has co-authored several textbooks in the fields of business management, administrative management and business administration.

Chapter 8

Dr Darelle Groenewald is a senior lecturer in the Department of Business Management at the University of Johannesburg. She has co-authored books on business management, small business management, office administration, information management, entrepreneurship and strategic management.

Introduction to business management for the entrepreneur

CHAPTER 1

Learning outcomes

After studying this chapter, you should be able to:

- understand the importance of small and medium businesses in the economy
- differentiate between entrepreneurs and business managers
- describe the business management tasks of an entrepreneur
- discuss the environments in which a business operates.

1.1 Introduction

When an entrepreneur starts a business, it is usually, but not always, a small business. Starting, managing and growing a business is an exciting prospect; for an entrepreneur it is an opportunity to create something new and develop it so that it remains an entrepreneurial business. It is important to realise, however, that entrepreneurship also creates new challenges, such as taking risks and the responsibility for the business, the employees and other stakeholders. There are many risks and uncertainties, but also opportunities, job satisfaction, financial rewards, a sense of achievement and recognition.

Successful entrepreneurs start businesses in a field where they have an interest, knowledge or experience. There is a direct link between the success of the business and the passion and expertise of the entrepreneur in that type of business. Knowledge about the right product(s) or service(s) when establishing a business is essential, but business management skills are equally important.

This book is about the business management skills required to manage a small business successfully.

1.2 Entrepreneur vs manager

Entrepreneurs spot opportunities and organise resources to create new businesses. They have the vision, business skills and courage to take risks, and possess the necessary leadership qualities to overcome problems. Entrepreneurs normally have a strong internal locus of control (their destiny and success are determined by their own actions), self-confidence, passion, determination and the management skills to plan and control the entrepreneurial process.

Example

South African-born Elon Musk is an example of an exceptional entrepreneur who established and grew multiple successful businesses starting from nothing. In his early twenties he left South Africa to pursue his American dream. With his brother Kimbal as partner he started his first business, Zip2, and later sold it to Compaq for $300 million. After that he co-founded X.com, also with his brother. That company later became the well-known PayPal online payment system. Eventually PayPal was sold to eBay for $1.5 billion.

Musk went on and used most of the money that he made from these sales plus a lot more that he borrowed, to start, establish and grow two new businesses, Tesla and SpaceX. Tesla is the luxury electric car manufacturer and SpaceX is a company that produces rockets. These companies were both extremely idealistic and are now very high-level businesses in the motor and aeronautical industries. Musk's business goals were to make the world independent of fossil fuel and humankind an interplanetary species.

His passion and interest was to explore space and go to Mars. In 2001 he started investigating the purchase of a rocket for sending a plant or mice to Mars. After negotiations with various Russian companies, joining the Mars Society and investing heavily in SpaceX, he and his team of experts started the process of building his first rocket. That rocket specialized in carrying smaller satellites and research payloads into space. SpaceX built its own engines, rocket bodies and capsules. It also designed its own motherboards, circuits, flight computers and solar panels.

After many trials and tribulations and having expended billions of dollars, the first privately built rocket was successfully launched in 2008. However, the exorbitant financial needs of a business that builds rockets became a major problem and SpaceX nearly went broke. But against all odds, and after a lot of planning and negotiations, SpaceX won a $1.6 billion contract from National Aeronautics and Space Administration (NASA) late in 2008.

Musk's close friends and associates have noted that he works extremely hard, that he handles extreme stress very well and is able to make clear long-term decisions in spite of that.

By 2015 SpaceX was well established and sends up a rocket that carries satellites for Canadian, European and Asian companies almost every month. At $60 million per launch, SpaceX's prices are well below that of competitors such as Boeing and Orbital Sciences. In addition, SpaceX is not reliant on other producers and countries such as Russia for parts as their rockets are built from scratch in the US.

SpaceX is now profitable, estimated to be worth about $12 billion and is still privately owned with Musk as the majority shareholder.

At the same time, amid high levels of stress and a serious shortage of cash, Musk managed to evade bankruptcy and gain sufficient loans and investors to build his other dream: Tesla. Tesla Motors subsequently delivered a beautiful all-electric sedan, the Model S, that greatly impressed everyone in the motor industry. Over the past 10 years Tesla has made 59 500 cars, most of them costing more than $100 000. The plans are to introduce a model at $70 000 in 2015 and in 2017 a model at $35 000. Musk's goal is to make available to the market an affordable mass-market electric car that will replace petrol-powered cars.

Sources: Tesla's not as disruptive as you might think (2015: 22–23); Meintjies (2015); Vance (2015)

The entrepreneur's role, however, differs from that of the small business manager in that the entrepreneur manages change by, for example, introducing a new product, buying a new business, deciding which risks to take, introducing new management systems and moving into new markets. Small businesses tend to swing in and out of periods of entrepreneurial change over time, after which periods of consolidation may take place.

Table 1.1: What is a small business?

A small business, according to the National Small Business Amendment Act 26 of 2003, is 'a separate and distinct business entity, including cooperative enterprises and non-governmental organisations, managed by one owner or more which, with its branches or subsidiaries, if any, is predominantly carried on in any sector or sub-sector of the economy'.

Small businesses can be classified as follows:

Class	Full-time employees less than	Annual turnover less than	Total gross asset value (property excluded)
Micro-enterprise	5	R150 000	R100 000
Very small	*6–20	*R0.4m–R4m	*R200 000–R1.5m
Small	*21–50	*R5m–R25m	*R1m–R4.5m
Medium	*51–200	*R4m–R50m	*R2m–R18m

Source: Adapted from National Small Business Amendment Act 26 of 2003

** Minimum and maximum figures depend on the economic sector in which the business operates.*

Small business managers have to manage, and management is the process of ensuring that the business achieves its goals and objectives. Small business management is essentially the management of a small business on a day-to-day basis. This includes tasks in all the functional areas, including marketing, purchasing, operations, finance, human resources, administration and public relations.

Management is also a business management function and involves the coordination of all the business functions. The fundamental management tasks include the following:

- **Planning:** Adequate planning is needed; in the long, medium and short term.
- **Organising:** This means taking decisions on how to divide up the work that is to be completed.
- **Leading:** This involves the effective supervision and motivation of employees.
- **Control:** This includes monitoring performance, in other words, comparing what should have been done with what was actually done. Corrective action should be considered if a gap is found to exist.

Important

An important focus area of effective management is getting things done through other people, not doing everything yourself and ensuring that tasks are accomplished and that customers and employees are satisfied.

There is, however, no doubt that if a small business is to be successful, entrepreneurship and good small business management go hand in hand. The two cannot be separated from each other.

1.3 Small business management

Small business management competencies are essential to ensure the success of a small business, especially its financial success. The success of any business depends on the individuals involved in the organisation. It is a fact that in South Africa, small businesses fail mainly because of a lack of capital, and management, marketing, technical, and negotiation skills.

The vast majority of businesses initiated by entrepreneurs originate as micro- or small businesses. These are usually started and entrepreneurially managed by one person. They can grow and become larger small businesses, or even medium or large businesses, provided that the entrepreneur does not become primarily managerially orientated, but remains entrepreneurially orientated.

How is South Africa doing?

According to Schussler (2010 and 2014), from a population of 50 million:

- A total of 1 233 000 people were self-employed, meaning that 8.2% of all employed people are self-employed.
- Over the period 2013–2014, 150 000 self-employed people closed their businesses.
- Approximately 1.8 million people created jobs for themselves and others.
- There are 776 000 employers in South Africa.
- Most of these employers own small businesses as the average number of employees per business is 11.5 employees.
- In 2010 only 301 000 people had businesses that paid salaries or wages to more than four people.
- These 301 000 businesses were responsible for the employment of 11 million people.

In the USA the private sector created 175 000 jobs in January 2014 and Small and Medium Enterprises (SMEs) were responsible for 141 000 of these (as opposed to only 34 000 created by large businesses). This clearly proves the important role that SMEs play in job creation. Most of the employment created was in the service industries, including professional and business services. As in South Africa, small businesses in the USA are defined as those with less than 50 employees, whereas medium businesses employ between 50 and 499 employees (Campbell 2014). The economic environment in the USA and the country's ranking according to the Global Competitiveness Index (GCI) is very favourable for private sector organisations including the establishment and growth of businesses.

South Africa is ranked 49 out of 140 countries on the GCI; down 16 places since 2010. This is primarily due to local issues such as hiring and firing practices; the flexibility of wage determinations; the burden of government regulations; the business cost of crime and violence, and the quality of electricity supply (Schwab 2015: 7).

As a business grows, the entrepreneur appoints more people. The entrepreneur cannot be everything in the business, and therefore needs to employ people to assist in making the business successful. The business can grow further by, for example, increasing production or introducing new investments through mergers and acquisitions.

Entrepreneurial businesses are usually started and managed by entrepreneurs, who strive to grow their businesses to become medium-sized or even large businesses. The entrepreneur is different from a manager, and is usually a person with good ideas. However, not all entrepreneurs know how to manage a business and they frequently fail at a later stage due to their inability to adapt to the changing needs of the business. This brings into focus the need for a more managerial and functional business management approach. The need for a more managerial style becomes important when the business has grown and is no longer a micro- or very small business. The continued success of an entrepreneurial business is determined by the ability of the entrepreneur to manage and lead the business through different stages of its development.

True entrepreneurs are those who not only establish a business but also have the intention to grow and the ability to manage their business. Some people believe that the entrepreneur should be replaced by a manager after a business has been successfully established. However, there is no evidence that a manager will perform better in a business established by the original entrepreneur. It has been found that many entrepreneurs learn how to manage their businesses effectively through the growth stages. Successful entrepreneurs are able to transform themselves into successful managers.

In the first phase, the entrepreneur establishes the business, which is relatively informal. As the business grows and matures, it becomes more formalised and business management skills become a requirement. According to the entrepreneurial leadership model, the characteristics of the business in the establishment phase are spontaneity and free-spiritedness, with informal communication and centralised decision making. During the next phase, efficient operation of tasks, formal communication during scheduled meetings and policies and procedures become necessary (Swiercz & Lydon 2002: 383).

1.3.1 Business management tasks for the self-employed entrepreneur

Self-employment usually begins when an entrepreneur decides to leave full-time employment in a business for the unknown, insecure and unpredictable world of a one-person business. This testifies to the entrepreneur's personality: they have the self-confidence and passion to take up challenges and risks and so improve their own circumstances.

As a self-employed person, the entrepreneur is alone and has to learn how to run a one-person business. As well as technical expertise or product knowledge of the business, it is now also necessary to be able to manage cash flow, accounts, invoicing, procurement, budgets, bookkeeping and taxes. In most cases, there will be nobody to delegate to and all the functions will have to be finalised on time by the individual. As the business grows, more people could be employed. It is, however, important to remember that the final accountability for the standard of work and financial success rests with the entrepreneur (Katz & Green 2014).

The self-employed have to secure contracts through marketing and networking on an ongoing basis, because without this work there will be no income and failure will be a reality. Much of the time will, therefore, be spent on finding work, completing it, compiling accounts and ensuring that payments are made. When the entrepreneur is able to generate more work than they can cope with, the opportunity arises for the business to expand and to employ more people.

1.3.2 Business management tasks for the entrepreneur as employer

As the business grows, the entrepreneur may employ more people and earn more income because a percentage of an employee's labour rate is earned by the employer. Once the business is employing more people, the entrepreneur has the option of dividing certain work activities.

The general management tasks of planning, organising, leadership and control (see Chapter 2) remain the primary task of the entrepreneur, but each person who is appointed also fulfils some of the tasks required to help the business work effectively. In particular, a manager/supervisor may be appointed to oversee the day-to-day functions in the business. The other important functional areas of a business that require attention are financial (Chapter 3); marketing (Chapter 4); operations (Chapter 5); purchasing (Chapter 6); human resources (Chapter 7); information (Chapter 8) and public relations (Chapter 9).

Important

This does not mean that a person has to be appointed for each of these areas. The entrepreneur will remain responsible for some of the key areas, such as formulating the vision, mission and key objectives of the business and managing the financial and marketing activities. The other functional areas might be taken care of by other personnel. As the business grows, different specialists need to be appointed to manage its increasing complexity.

All the functional areas mentioned above, which are essential for a successful business, become more important as the business grows. As an employer, the entrepreneur will still attend closely to operational matters, but, as the business grows, more delegation will be required. People will have to work independently, so that the entrepreneur can free up time to attend to the overall performance of the business.

One important area that an entrepreneur should attend to when the business grows is increasing the size of the workforce. This means that the entrepreneur has to know about human resource management (recruitment, training, motivation, team building and communication); the personnel requirements of the business will have to be correctly balanced in order to achieve objectives. Leadership skills will need to be honed to solve problems, make decisions and give the business direction. Other important functions include the development of an effective marketing and sales team, business structures, financial skills and improving technical skills.

The question of 'supply chain management' is also important, and must receive attention from the entrepreneur. All businesses find themselves caught in a supply chain quandary between clients and suppliers. Aspects to be considered are the following: the trade-off between just-in-time (JIT) supply of stock and the risk of production downtime, and the trade-off between long production runs to reduce unit costs and the risk of increased warehousing and inventory costs (see also Chapter 5).

At this stage, it should be clear that, while the business is small, the entrepreneur can manage everything on a day-to-day basis without formalised structures.

As the business grows, an ad hoc management style needs a more formalised approach to ensure proper planning, leadership, organisation and control. This is where the challenge lies: entrepreneurs are motivated by freedom, opportunities, profit and risk, because they are made that way. On the other hand, managers are motivated by policies, resources, delegation, systems and security (Burke 2006: 30).

Henry Ford once said: 'It is important to employ people who are smarter than you in every field of your business'. The entrepreneur needs to appoint a team of experts so that they do not have to do all the work and can rely on the expertise of others to remedy any shortcomings that they may have overlooked.

1.4 The environment in which businesses operate

The environment in which public and private enterprises operate to satisfy human needs is influenced by broader social, political, economic and technological environments. Public enterprises are funded and managed by government, provincial administrations or local authorities, and they are not created to make a profit. They are responsible for providing the basic requirements for the efficient functioning of the economy and meeting the needs of society.

Important

In a market-driven economy like South Africa's, business has to pay for all the factors of production (natural resources, labour, capital, etc) to be able to make profits. The entrepreneur who sets up a business has to make important decisions on combining factors of production, and has to take into account environments that have an impact on the business (see Figure 1.1).

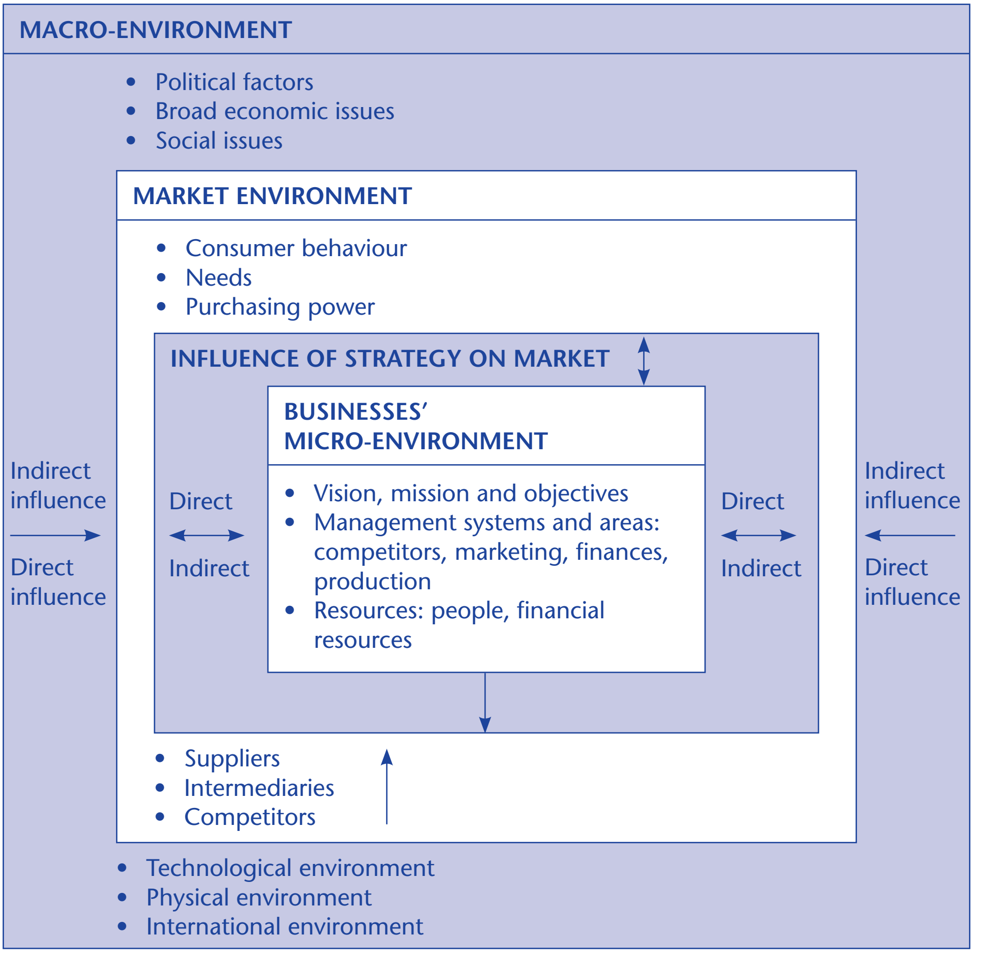

Figure 1.1: Business environments

The three important environments impacting on businesses are the micro-environment, the market environment and the macro-environment.

1.4.1 Micro-environment

The internal, or micro-environment, consists of the aspects that business entrepreneurs and managers are able to control directly. The focus of this book is on this environment. The decisions taken in the micro-environment will in turn influence the market environment. These decisions will depend on the strategies that the business follows. Aspects of importance are the vision and mission of the entrepreneur and the objectives pursued. Because the entrepreneur is self-employed, these aspects may not be very formalised at first, but as the business grows, more attention will be given to the management system employed and the way resources are utilised.

It should be noted that the three environments are interdependent. A change in the micro-environment may have an influence on the market environment, and vice versa, and a change in the macro-environment may have a direct or indirect influence on the micro-environment. For example, an increase in inflation and a rise in the interest rate will have an influence on the cost of capital and on product prices.

The constant change in the environments is a factor that an entrepreneur should anticipate in the course of all planning. Certain industries are more prone to change. For example, the technology industry is more exposed to change than the mining industry.

The complexity of the environment and the industry is also an important aspect for the entrepreneur to bear in mind. A coffee shop is less exposed to complexity and change in the environment than a shop selling electronic equipment.

1.4.2 Market environment

The market environment has the potential to influence, to a large degree, how a business is managed. This influence is exerted through the behaviour of consumers, suppliers and intermediaries, who are all sources of opportunities and threats to the business.

Consumers

Businesses should take note of the demographics of the country, because the population is not evenly distributed. This is especially true when an entrepreneur wants to establish new businesses or to expand the present business. Success in business depends on taking the buying power of communities and their preferences into account. There is no point in selling a product in an area where the community cannot afford it, or does not want to buy it. It is therefore essential that a business should be up to date on buying preferences to ensure that the right goods and services are offered at the right price. The macro-environment can also influence the market environment directly. Examples here include political trends (eg the introduction of new legislation), economic trends (eg higher interest rates) and demographic trends (eg migration to cities).

Suppliers

Businesses need various inputs to operate: for example, capital from financial institutions, raw materials, services and labour. These inputs are obtainable from suppliers. To operate effectively, the business needs to obtain these inputs at the right time, quantity, quality and price. It should be remembered that businesses are also suppliers of goods and services to other businesses, and there should be a healthy relationship between the suppliers who provide inputs and the business that buys them.

Intermediaries

Intermediaries are wholesalers, agents, brokers and other facilitators who transfer products and services between businesses. These intermediaries may influence smaller businesses' marketing strategies in various ways, such as using brand names, increasing pricing and keeping inventories.

Competitors

The free market economy is characterised by competition, where each business has to compete for its share of the market. Success depends on the type, quality and price of products. Competition also prevents businesses from making unreasonable profits, stimulates them to improve quality and productivity and encourages innovation and technology. Competition can be keen or moderate, depending on which sector of industry the business operates in. The entrepreneur needs to constantly manage the competitive environment to be able to maintain or improve their position.

1.4.3 Macro-environment

The macro-environment in which businesses operate is classified according to six variables: political, social, physical, economic, technological and international. These sub-environments must be monitored and appropriate responses provided to them. Not only are businesses influenced by these variables, but they are also influenced by each other. For example, if a new political party wins a majority in Parliament, and the priorities of the new government differ from those of the previous government, this can have a dramatic influence on the social and economic sub-systems in the macro-environment. Changes in spending patterns and economic policy can influence the way in which small businesses operate; one result might be greater regulation. Each of these variables will be discussed briefly.

Political environment

The political or regulatory sub-environment influences how businesses are managed in various ways. Government influences the macro-environment by means of legislation (eg the Labour and National Small Business Acts), economic policy (eg interest rates) and budgets (taxes, trade and industry), to name but a few.

Social environment

This environment consists of many dimensions, including culture, language, religion and customs. Society and culture influence individual behaviour and, accordingly, have a direct influence on the preferences and spending patterns of individuals. These elements are also constantly changing. There are, however, many factors that influence society, namely, demographic trends (which include age distribution), the size of the economically active population and literacy skills. These trends should be noted by the entrepreneur.

Further factors include crime and security, HIV/AIDS, the role of women in society, social responsibility, poverty, unemployment, business ethics, the workforce, cultural diversity and the rights of the customer.

Physical environment

The physical environment includes the essential resources required by people and businesses: for example, water, land, rivers and other natural resources. Businesses need resources to be successful, and, at the same time, they may recycle used resources back into the environment. Sustainable business practices require that businesses act responsibly to ensure that scarce resources are protected, that they do not cause pollution and that energy costs do not escalate. The emphasis is on responsible corporate citizenship.

Economic environment

This environment is influenced by the political, social, technological and international environments, but, conversely, influences the other environments significantly. A country's economic growth and wealth are measured by the products and services that it produces.

The total number of services and products supplied in one year are measured in financial terms by the Gross Domestic Product (GDP). The GDP is the total value of all final products produced within the borders of a country. The growth rate of a country is an indication of how successful a country is in providing jobs and income to its citizens. Part of the GDP is contributed by small businesses. South Africa's GDP for 2012 was US$384.31 billion (ranked 29 out of 204 countries), China's was US$8.36 trillion (ranked 3), and the United States, which was ranked 2 (after the European Union) had a GDP of US$15.68 trillion. By comparison, Zimbabwe had a GDP of US$10.81 billion, which placed it 129th in the ranking of 204 countries (Nationmaster.com 2015).

Global Entrepreneurship Monitor

According to the findings of the 2014 Global Entrepreneurship Monitor (GEM), of the 2 500 South African small and medium enterprises that participated in the survey, 20% were profitable, 30% just profitable, 24% were breaking even and 9% were struggling.

Some 35% of the adult population sees business opportunities but 25% of these people will not start their own businesses for fear of failure.

Businesses that create jobs are primarily male-owned and opportunity-driven by people with tertiary education.

In South Africa, most entrepreneurs (71%) are opportunity-driven when they start a business because they identify an opportunity in the market and 28% are necessity-driven, as they start a business because they have no other option for income.

South Africa ranks 53rd out of 70 countries on Total Entrepreneurial Activity (TEA), with only 7% of the working population involved in early stage (from start-up to 42 months) entrepreneurial activities.

Only 2.7% of the South African adult population owns established businesses (in operation for more than 42 months).

Source: Herrington et al (2014)

When a country's standard of living drops, the purchasing power of individuals also changes. Entrepreneurs should take note of the upward and downward movements of the economy, because each cycle has its implications for businesses. Knowledge of the monetary and fiscal policy of a country is vital to the entrepreneur. Interest rates, inflation, value of the rand (aspects of monetary policy) and fiscal policy changes should be noted by entrepreneurs and taken into account in planning. South Africa has an open economy, which makes it sensitive to changes in international economies.

Technological environment

Changes in technology have a dramatic influence on the lives of individuals and businesses. Technology increases the capabilities of individuals and has a direct influence on the economy and social structures. New inventions, like tablets, smartphones, new computer systems and software have an effect on existing products. These may become outdated and prices may drop. Such changes may enable entrepreneurs to identify new opportunities or potential threats.

International environment

All of the above environments influence each other and businesses directly or indirectly. The picture becomes more complicated when the international dimension is brought in. Small businesses that import or export products and services operate in a far more complex environment: more challenges and opportunities exist, but each country in which a small business trades should be studied carefully. Areas such as culture, the economy, values, politics and legal systems influence the trading environment and should be taken into account.

1.5 Summary

In this chapter, the focus has been on the entrepreneur as the owner of a business and on the various management tasks associated with running a successful business. Emphasis was placed on the business tasks associated with a self-employed entrepreneur and the entrepreneur as an employer. The tasks of self-employed entrepreneurs are centred on the personal skills of the entrepreneur, which include securing work, doing the work and securing follow-up payment for completed work.

As a business grows and the entrepreneur employs more people, other functions have to be applied, such as general management (planning, organising, leading and controlling), and other functional areas are needed to run the business. These include the financial, marketing, operations, purchasing, human resources, administration and public relations functions.

The focus of this book is on these functions, and the approach is to provide an insight into how each functional area contributes to business success. It should be noted that each of these functions has to be performed by any small business in order to be successful. At the start of a business, one or two people may be responsible for all these functions; however, as the business grows, various departments that specialise in one functional area may be created, each with a separate manager in charge.

The last part of the chapter discussed the micro-environment, the market environment and the macro-environment in which businesses operate. Each of these different environments influences small businesses in various ways, and the entrepreneur needs a good understanding of each in order to make business decisions that will lead to success.

Questions for self-evaluation

1. How do small and medium businesses contribute to the economy of South Africa?
2. Compare an entrepreneur and a business manager regarding how they operate, their primary objectives and responsibilities.
3. What are the business management tasks of self-employed entrepreneurs? Explain the importance of each task.
4. Identify and describe the three environments in which a business operates.
5. Describe South African SMEs according to the findings of the Global Entrepreneurship Monitor.

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Legislation

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General management

CHAPTER 2

Learning outcomes

After studying this chapter, you should be able to:

- analyse the major challenges of managing in the new economy
- discuss the functional perspective in the business
- compare the description of general management with the description of other business management functions
- sketch the role of management and represent this in a diagram
- illustrate planning and the different levels of planning as the first task of the management function
- explain control as a task of the management function
- describe organising as the framework for the business's activities
- give an explanation of the role and importance of leadership as a fundamental task of management
- distinguish between the different additional management tasks
- apply the managerial competencies in your business.

2.1 Introduction

In this chapter, we will take a broad look at the field of management. We will briefly discuss the general guidelines and the framework within which entrepreneurs apply management principles to manage a business. We will also explain the managerial competencies that you should have if you want to manage effectively.

The chapter provides a holistic view and an outline of the management process. Before we can understand this view of management, however, we must first be conscious about the world we live in.

Quote

Henry Ford said: 'We're living in an age of transition.'

Change certainly has been the norm over the past decades, even though each generation thinks its period of change is unique. The 'old economy is gone', giving way to the 'new economy'. The new economy plays by different rules. Whether or not that is an overstatement, the internet and other forces are transforming the country and the world, and especially the business world.

2.1.1 The new economy

Today's entrepreneurs must manage their businesses in an economy of ideas. This is the so-called new economy mentioned above. South African entrepreneurs are entering a future characterised by fundamental changes involving cost, efficiency, technology, globalisation, knowledge, innovation, quality and decision making.

To manage effectively today, entrepreneurs cannot make use solely of the Industrial Age business model or the new internet model. Although both of these are still highly applicable today and must be understood and managed appropriately, the entrepreneur must recognise the new opportunities and threats, and resolve them by applying the principles of management.

The success of the business depends on the way the entrepreneur incorporates these changes. Learning and knowledge are important, and entrepreneurs should encourage their employees to share information and knowledge.

If entrepreneurs want to be successful and steer their businesses through the stormy and changing environment, they need to have an attitude of taking calculated risks. In this new economy, where strategies, processes and cultures are continuously changing, the key to survival is leadership. Leaders are people who do the right thing; therefore, if entrepreneurs want to survive and succeed they must generate new ideas and demonstrate leadership.

Comments on the new economy

Quote

'That's what is so awesome about the new economy. You have the ability to do something with your work and to know that you made a difference. You. Not your system. Not your company's policies. You.' – *Pehong Chen, Chairman, President and CEO of Broadvision Inc.*

The above statement refers directly to your role as entrepreneur in the new economy of ideas.

You, as the entrepreneur, who establishes, grows and manages your business, must recognise and acknowledge the following key components that reshape the world of this new economy:

- the rise of new communication technologies
- globalisation
- the importance of knowledge and ideas
- alliance across the business's boundaries.

If you want to be a successful entrepreneur and manage a successful business, you must recognise the influence of these key components in your business.

New communication technologies

Communication technologies are responsible for enormous change in the business world. For example, consider the effect of the internet on business. This means that entrepreneurs must think and act differently regarding the management process if they want to be successful. Technology not only complicates business, but also creates new opportunities. Sharma (2002: 28) believes that the new economy will bring about a major shift in business. He describes this shift as a 'transformation to an electronic economy, from the economics of equipment to the economics of information'.

Globalisation

Multinational businesses have global offices and production facilities. They operate worldwide without reference to national borders. This also means that the workforce of such businesses can come from anywhere in the world. Entrepreneurs cannot ignore this trend if they want their businesses to succeed. Entrepreneurs, therefore, must be able to manage their businesses, small or big, in an international market.

Knowledge management

The most important drive for change in management today is the rising need for new discoveries, inventions and innovations. Knowledge management is a process. It is a process of discovering and connecting a business's intellectual resources. In simple terms, it means that the entrepreneur must utilise the intellects of the people who work for the business. 'Knowledge management' refers to the fact that the entrepreneur must find, unlock and share the expertise, skills and wisdom of their people, and nurture relations between them (Bateman & Snell 2013: 7).

Alliance

A direct consequence of knowledge management is to ensure that people in different parts of the business work effectively together. This means that the communications between different members in the business, and between departments, functions or other subunits of the business, must be of a high level. For the entrepreneur who manages a small business it is of the utmost importance that all the activities of the business are aligned with each other. The component of alliance is linked to the functional perspective.

2.1.2 Business functions: a perspective

Every business deals with eight business 'functions'. Normally, businesses comprise seven functional departments, each of which handles one of these business functions; namely operations, finance, purchasing, marketing, information, human resources and public relations (see Figure 2.1). General management, the eighth function, is not a separate department, but it functions across each of the seven functional departments.

Together, the seven functional departments represent all the activities performed in the business. These functions form the guiding principle of this book. Each of these functions will be discussed later in further detail.

In a big business, a functional manager will manage a department. Functional management lies at the level of middle management. A functional manager is responsible for a certain departmental function, for instance marketing, purchasing or production.

In a small business the entrepreneur will group some of these activities together and manage them collectively. The entrepreneur will appoint a person or persons to help them to manage the other activities.

Definition

The entrepreneur can also outsource some of these functions to a business or person. ***Outsourcing*** is 'the process of transferring responsibilities for a specific business function from an employee group to a non-employee group'.

Source: Zhu, Hsu & Lillie (2001)

Consider, for example, the personnel managers in a big business, who are responsible for recruiting, selecting, placing, training, retaining and motivating the employees. As managers of a very important function, they are involved in negotiations between trade unions and management, training and development of employees, grievance procedures, settlement of disputes, implementation of government regulations that affect employment, performance evaluation and employee interests that affect productivity. In a small business, the entrepreneur may be responsible for this function, or may appoint a person to manage it.

According to Stark and Du Plessis (2004: 2), the change from the old economy to the new economy creates a positive environment for the entrepreneur to outsource some of these specialised functions when needed. Most entrepreneurs cannot afford to appoint highly skilled experts on a full-time basis, so they therefore outsource them.

Effective functional management requires that the objectives of each functional department should be achieved and that policy should be executed effectively.

The long-, medium- and short-term aspects of the functional departments are addressed here. Medium- and short-term planning and control are particularly important.

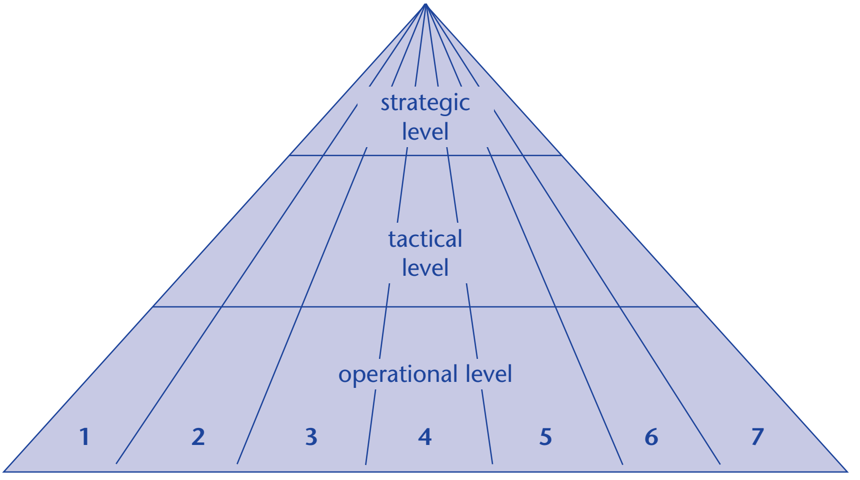
If the entrepreneur or functional managers could each manage their own departments independently of the business, coordination would not be necessary. However, this is not possible, because each function in a business is like part of a machine. The machine will function only if all the parts work correctly. If one or more parts do not function, are missing or broken, the machine will not work. Differences between functions must, therefore, be identified, corrected and aligned with each other.

The departments – or functions – of the business must be coordinated in such a way that they all move in the same direction and support one another so that the overall objective can be achieved.

Important

It is generally the entrepreneur's or, in big business, top management's responsibility to ensure cooperation, alignment and unity between the various business functions, but every functional manager must also try to achieve this. Planning, for instance, cannot be done separately by the various functions. For example, it is detrimental if the financial department wishes to expand, but the human resources function is not aware of this. Who will recruit and employ the necessary staff? The matter will be facilitated only if the management process is approached as a team effort.

The functional departments in a business can be represented diagrammatically as shown in Figure 2.1:



1 = Marketing; 2 = Procurement; 3 = Operations; 4 = Finance; 5 = Human resources; 6 = Public relations; 7 = Other departments

Figure 2.1: Functional classification of a business

Source: Smit et al (2011: 10)

Strategic level

The final authority and responsibility for carrying out management duties will be taken on a strategic level. The functions of this level are unstructured and unpredictable. At this level routine tasks constitute a very small part of management. On this level the entrepreneur must always devote time and attention to strategic planning, that is, to the systematic setting, structuring and/or adaptation of the organisation's objectives. Long-term objectives are particularly important here. Entrepreneurs will set long-term objectives such as profit growth of 7% over the next three years and expansion of market share by 8% over the next five years.

At this level, the focus is therefore on strategic management through the formulation and implementation of strategies and objectives.

On the strategic level, the entrepreneur must also be familiar with the external environment in which the business operates. The organisational environment plays an important role when the strategy to be followed in the business is determined. The entrepreneur must therefore study the effects of the environment carefully and take these into account before formulating a strategy.

Tactical level

On this level the entrepreneur focuses on tactical activities to ensure that the strategic plans can be implemented. On the tactical level, the entrepreneur is primarily responsible for implementing the policy, plans and strategies and for the allocation of resources. Medium-term or functional planning takes place on this level and this involves all the functional strategies and plans made in the various departments of the business. If funds allow, the entrepreneur will appoint financial, operations, marketing, procurement or information managers to operate on this level.

On the tactical level, the entrepreneur and the management team of the business are concerned with medium- to short-term planning, and with organising, leading and controlling human and other resources within a certain section of the business.

At the tactical level:

- work is more routine
- a greater degree of technical knowledge is required
- there is more direct involvement in human and other resources.

Operational level

On this level the entrepreneur is concerned with all the activities regarding the daily tasks of the business. This involves short-term planning and implementation of plans and objectives. In other words, short-term, routine or operational planning is done on this level.

2.1.3 General management and other functional management areas

General management

As stated earlier, general management differs from the other business functions in that it cannot be placed in a 'department' on its own. General management concerns all the tasks that are necessary to the very important function of management on all levels throughout the entire business. In this chapter, we will discuss the different business functions and their respective management tasks that need to be handled effectively.

Human resource management

Human resource management includes all the activities concerned with the procurement, development, compensation, integration and retention of personnel.

Operations management

Operations management refers to the management process used in manufacturing businesses, as well as in service businesses. Operations management can be described as those management activities that take place so that products and services can be provided to satisfy the needs of the consumer.

Procurement management

This function deals with the acquisition of all the resources that a business needs to achieve its objectives. This includes, among other things, the determination of purchasing needs, the establishment of alternative suppliers who can satisfy these needs and the negotiation of agreements with them to the long-term advantage of the business.

Marketing management

Marketing is the process of transferring goods and service to customers in order to satisfy their needs, as well as the activities that make the transfer possible. Marketing entails more than just advertising products and services as it includes a variety of activities across all functions of the business.

Public relations management

This is the management function that evaluates public attitudes, promotes the policies and procedures of a business to the public, and plans and executes programmes of action to earn public acceptance and understanding.

Information management

The information function is concerned with the service of obtaining, recording and analysing information and communicating the results to management, who can then safeguard these assets, promote the activities and achieve the objectives of the business.

Financial management

Financial management refers to the management of the business's financial activities. The financial functions include all the activities in the business that involve obtaining capital and using it efficiently. The financial manager is responsible for controlling all the financial activities of the business.

2.2 General management

Before we define management, it is important to indicate the different users of general management. One user will be you yourself. You can use general management principles in your daily life outside of business to help you manage your personal life better.

The second group of users includes the entrepreneur and the manager, who need to use general management so that they can be more effective in the workplace. General management refers to a process that will help them to get things done and to achieve the business goals through the efforts of other people.

For the purposes of this book, however, we will use the following definition of management:

Definition

'***Management*** is the process of utilising an organisation's resources to achieve specific objectives through the tasks of planning, organising, leading and controlling.'

Source: De Beer & Rossouw (2015: 4)

The following aspects of the above definition are important:

- **Resources.** Resources in a business refer to human, financial, physical and information resources. Resources are limited, and the business must use them wisely so that it achieves the greatest possible measure of prosperity.
- **Achieving objectives.** Objectives refer to clear goals that the business must achieve in order to continue to exist.
- **Planning.** Planning is chiefly concerned with setting objectives and with devising the necessary schemes to achieve these objectives.
- **Controlling.** By exercising control, an entrepreneur ensures that people carry out instructions according to plan. If instructions are not carried out according to plan, a manager can still exercise control by making the necessary corrections or adjustments.
- **Organising.** Organising means the coordination of activities and the allocation of work to certain people so that the objectives of the business can be achieved.
- **Leading.** Leading refers to the way in which managers help people to achieve the planned objectives of the business.

The definition of management can be illustrated diagrammatically as follows in Figure 2.2:

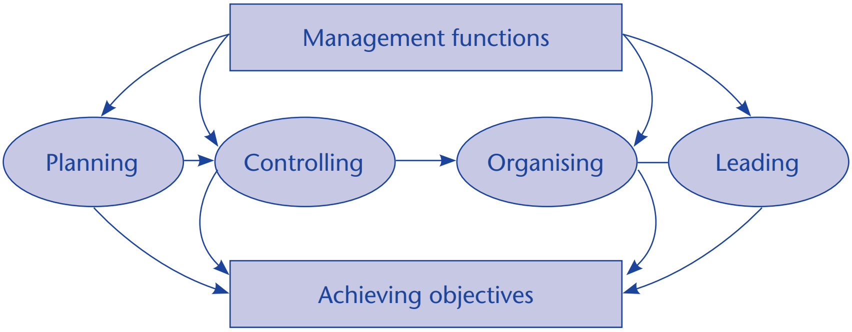


Figure 2.2: Definition of management

Source: De Beer et al (1998: 11)

2.3 The role and tasks of management

In order to better understand the tasks of management, we must first remind ourselves of the role of the entrepreneur.

The role of the entrepreneur is to utilise the scarce resources available and to achieve the objectives of the business through planning, organising, leading and controlling to satisfy the needs of consumers.

However, the objectives can be achieved only if the entrepreneur is able to make decisions.

Decision making is the process of identifying problems, finding alternative solutions, evaluating these solutions and then choosing the best one. The solution must then be implemented.

We will now study the four tasks of management in more detail.

2.3.1 Planning

Planning is the starting point of the management process. It is the basic element of management, which determines in advance what the business wants to achieve and how this can be attained.

Planning involves all those management activities that deal with setting the business's objectives and determining how these can be achieved.

Levels of planning

Different types of planning are carried out at each level of management. Table 2.1 briefly summarises this:

Table 2.1: Levels of management

Level of management	Type of planning
Top management (entrepreneur)	Strategic planning: long-term objectives
Middle management	Functional or tactical planning: medium-term objectives
First-level management	Operational planning: short-term objectives

Source: De Beer et al (1998: 16)

Strategic or long-term planning involves the development of a broad, long-term strategy to reflect the mission of the business. The time frame for this type of planning stretches from three to ten years or longer. The planning is not done in specific details; instead, broad general guidelines are drawn up to ensure that the business remains on track. This sort of planning is not static, but dynamic.

Tactical or medium-term planning is derived from long-term planning. It is aimed more specifically at the business activities, and extends from one to three years. Medium-term plans are drawn up for every section of the business.

Short-term or operational planning usually applies to a term of not more than one year. It involves giving instructions to the team and actioning them on a daily basis according to the set objectives.

Planning, therefore, is that aspect of management in which you determine in advance what you want to achieve with your business and how you want to achieve it. When you plan, you draw up objectives for your business and work out a systematic plan for achieving those objectives.

There is a very close connection between the planning and achieving of objectives, which are formulated at various levels in the business. Planning is then done to achieve these objectives, despite possible problems or obstacles.

During your planning, you will have to decide on the primary objective and the secondary objectives of your business, and also what resources you will use. The primary objective is the overall objective, which determines the direction of your business in the long term. The main objective of small businesses is usually to make a profit. The secondary objectives are the additional objectives that you must set to achieve your primary objective. They include natural resources, such as land and buildings, and other resources, such as personnel and capital.

Types of objectives

Objectives are the goals that the business aims to achieve. A business usually aims to achieve the following types of objectives:

- long-term (or strategic) objectives
- medium-term (or functional) objectives
- short-term (or operational) objectives
- the personal (or individual) objectives of the employees.

The various objectives in a business and the levels at which they occur can be illustrated as a triangle, as shown in Figure 2.3:

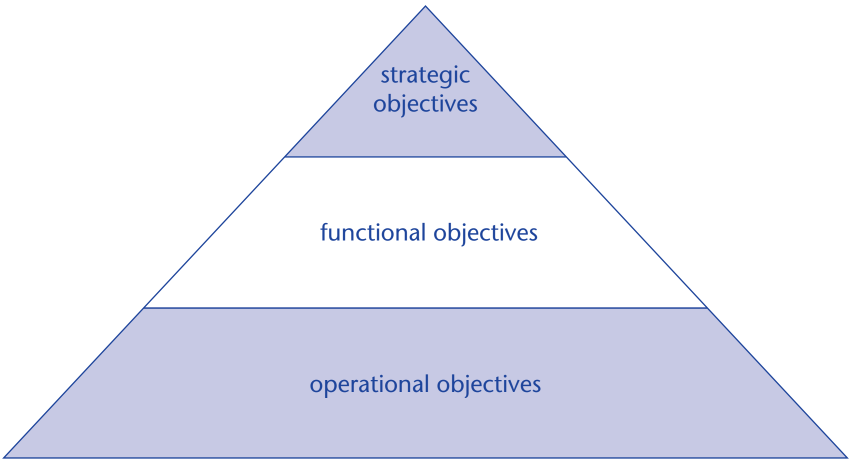


Figure 2.3: Objectives according to levels of management

Strategic objectives

Entrepreneurs determine and formulate the mission of the business. The business sets a number of long-term objectives to realise this mission.

However, you should remember that the long-term objectives form part of the hierarchy of objectives. Long-term objectives are the *reasons* the business exists, but these need to be linked to the activities that must be carried out to achieve the business's objectives.

Examples of strategic objectives are:

- delivering a good service to customers
- establishing and consolidating a positive image of the business
- a steady growth in sales volume
- achieving an asset growth of 10% per year.

Functional objectives

In most cases, the functional, or tactical, objectives are medium- to short-term and are derived from the long-term objectives of the business.

The following are examples of tactical objectives:

- for the production department – a 20% increase in productivity over the next four years
- for the marketing department – a 5% expansion in its market share over the next three years
- for the finance department – to limit the business's loans to 50% of asset value.

Operational objectives

These are short-term objectives that must be achieved within a year, a quarter or a month.

Examples of operational objectives are:

- to simplify the work in the administration department
- that the accountant must supply accurate financial information on a quarterly basis
- a 10% increase in sales compared with the previous month.

Individual objectives

Individual objectives refer to the personal objectives set for each member of staff with regard to their work and function in the business.

The following are examples of individual objectives:

- a production worker must maintain the scheduled rate of production
- sales staff must determine exactly what the clients' needs are
- the accounting clerk must complete work quickly and accurately.

Setting objectives

A good objective meets the following requirements:

- It should list specific things that the business must strive to achieve.
- A period should be specified within which it must be achieved.
- The department or people responsible for achieving it must be clearly identified.
- It must be measurable.
- Objectives must be drawn up in order of priority.

- It must be consistent with other objectives in the business.
- It must be reasonable, so that it will be acceptable to staff.
- It must be flexible, and adaptable to changing circumstances.

Planning must be realistic and flexible. To ensure that your planning is realistic, you need information. This information is obtained largely from past experience. Such information is important because it gives you a perspective on the present to allow for realistic planning for the future.

Planning takes place in distinct steps

Planning not only involves the implementation of plans, but also visualising the end results.

We can identify the following steps in the planning process:

Step 1: Identify opportunities and threats

Before you formulate any plans, you should consider all the possible opportunities that could allow you to grow your business, and threats that could adversely affect your business. As the owner, you should have a clear picture of your business so that you can evaluate all these opportunities and threats. For instance, what are the chances that your market will increase or decrease?

Example

Assume that you own a bakery close to one of the planned stations for the Gautrain. With more people in this area, you foresee that your market and turnover will increase. You therefore have an opportunity to expand. However, you should also take into account that part of the increase in your market could last only a short time, while the station is being constructed. After the station is completed, most workers will leave the area and your bakery's market will decrease. However, there will still be an increase in customers given all the people who will now use the station to travel on the Gautrain. You should therefore consider the opportunities along with the threats.

Step 2: Formulate objectives

The second step in the planning process is to formulate objectives. Through this process, the end result which the business wishes to achieve is defined. Giving a clear description of the business's objectives and the objectives of each function, division or project is a critical part of planning.

If there is no certainty regarding precisely what should be achieved, it is not possible to apply the resources of the business effectively.

As owner of the bakery in the example just given, you will have to take certain decisions about your increased market. For instance, you may decide to temporarily increase your production by 45% to provide for the increased demand.

Step 3: Make assumptions and draw up plans of action accordingly

The information gathered must be thoroughly analysed and should be both inclusive and accurate. Because the future holds many uncertainties, it is not always possible to make all decisions in advance; you must therefore make certain assumptions.

If decisions are made on the basis of assumptions and probabilities, the predictions must be realistic.

Assumption one for your bakery may be that the greater demand will last for two years before decreasing.

Assumption two may be that the greater demand will last for three years, but that your customers will grow during that time so that after that there will not be such a decrease in demand.

Step 4: Identify alternative plans of action

Now develop alternative plans of action for all the assumptions that you have made. For instance, in the case of assumption one, you may plan to employ more temporary staff to provide for the increased demand. In the case of assumption two, you may purchase more ovens to increase production capacity.

Step 5: Analyse and consider alternative plans of action

A business must take various factors into consideration when formulating alternative plans, namely the influence that the macro-environments will exert on the business, the strong points of the business and the costs associated with using an alternative plan.

Weigh up the various plans against each other and look at the advantages and disadvantages of each. Consider each plan from every angle and consider exactly what effect each plan will have on the business.

The advantage of assumption one is, for instance, that you will have to pay the salaries of temporary staff for a certain period only. A disadvantage is that the time that you devote to their training is not fully compensated for in their employment.

Step 6: Choose a final plan

After all the alternatives have been taken into consideration, the best one is chosen and put into operation by the business.

For instance, you may decide that assumption one is more realistic; therefore, you decide to employ more people to work in shifts, rather than purchasing extra ovens.

Step 7: Draw up a budget

Before you can put your plans into operation, you must draw up a budget. This will ensure that you have the necessary financial resources to carry out those plans.

Does the bakery have sufficient funds to cover the salaries of temporary workers?

Step 8: Implement the plan

After all the above-mentioned factors have been taken into consideration, the chosen plan, as formulated by the business, can be executed according to the planned framework. For instance, the bakery will advertise for temporary staff and will start training more bakers.

The other three management tasks, namely controlling, organising and leadership, are necessary to enable the plan to be carried out successfully. If one of these tasks is lacking there is a danger that the plan may fail.

Time management

It is very important to manage your time. This is true for every entrepreneur. An entrepreneur has to prioritise what has to be done now and what can wait for a while. One way to do this is by inserting tasks in a template such as the one represented in Table 2.2. Remember, the importance and urgency of a task is determined by the goals and objectives of the entrepreneur's business.

The following criteria can be used:

- If a task is both important and urgent, it needs to be done immediately.
- If a task is important but not so urgent, it can wait for a while.
- If a task is not important but urgent, do it, but do not spend a lot of time doing the task.
- If a task is not important and not urgent, plan to do the task at a later stage.

Table 2.2: Time management template

Not urgent – not important	Urgent – not important
Not urgent – important	Urgent – important

Source: Adapted from Covey et al (1994: 7)

2.3.2 Controlling

A combination of good planning, organisation and leadership is useless to the business if there is no effective control. Good control means effective control – in other words, the creation of suitable control systems and standards which will meet the business's unique needs.

Definition

Control is the creation of realistic standards against which the actual performance of the employees and the business can be measured and whereby any deviations from the business's standards can be detected in good time. If deviations do occur, the necessary corrective steps can be followed to ensure that the set objectives of the business are achieved.

Control is exercised when management ensures that its plans and instructions are carried out. A management information system is used to check on and measure employees' performance and to compare this performance with the set standards and objectives. Feedback is then given to employees.

Deviations can thus be determined so that corrective action can be taken to ensure that, as far as possible, objectives are achieved.

The control process

According to Bates et al (2005: 338), the control process can be divided into four steps, namely:

1. determining and communicating standards and methods against which performance is measured
2. measuring the actual performance
3. evaluating and comparing actual performance against set standards
4. taking corrective action if necessary.

Example

To explain the steps better, we will use the example of a business that designs and makes clothes. The owner sells the clothes to five different boutiques. Two workers cut out patterns and three other workers do the stitching.

Determining and communicating standards and methods against which performance is measured

Depending on what needs to be controlled, standards and criteria can be set for any activity or event which takes place in the business. To ensure effective control, the standards must be set out realistically and clearly and they must be acceptable to the workers concerned. The method of measurement should also be acceptable and correct.

A criterion for the cutters, for instance, may be the number of patterns that they must cut out per day – and for the stitchers, the number of items they must complete per day.

Measuring the actual performance

Control is a continuous and repetitive process which must be instituted at the lowest possible cost. How regularly the measurement takes place will depend on the type of activity which is measured, for example the type of product or production line. A long period of time between the actual performance and the measurement of the performance may have catastrophic consequences for the business. Deviations from the set standards should be detected as soon as possible, so that corrective action can be taken immediately. The measurement must be done accurately to provide a reliable picture.

For instance, at the end of each day you should take note of how many patterns the cutters have cut and how many items the stitchers have completed.

Evaluating and comparing actual performance against set standards

During the measurement process, deviations in actual performance should be interpreted in accordance with set standards. Certain deviations may be temporary in nature, for example a falling sales figure in January, as compared with a high figure in December. However, other deviations can harm a business if corrective steps are not taken immediately. An example would be a rise in production costs, together with decreasing production output. The reason for the deviation must also be determined.

In the case of our example, the reasons for any deviations by the cutters and stitchers from the set standard must be traced as quickly as possible.

Taking corrective action if necessary

If performance does not meet the standards of the business, the analyst may find that corrective action is necessary. This corrective action may mean that the original standards of the business could change.

The emphasis should always be placed on constructive action, as this will ensure that actual performance is raised to meet the set standards, instead of trying to look for the cause of the deviation in the past.

2.3.3 Organising

Organising is a management function by means of which a business structure is established through the distribution of tasks, the allocation of resources and the coordination of activities to achieve the objectives of the business.

Organising also involves delegation. Duties, authority and responsibilities are allocated to people in positions of leadership, and their relationship with each other should promote cooperation and effectiveness in the business.

The organising process

Organising takes place where two or more people cooperate to reach a common goal. This means that the goal must be determined beforehand. It should state how, by whom, with which resources and at which time a task will be executed to achieve the objectives of the business.

Organising as a management task is chiefly concerned with the classification and allocation of activities to main divisions and subdivisions, the creation of posts within those divisions and the determination of duties, authority and responsibility.

To ensure that the organising process is carried out as efficiently as possible, it must be logical and systematic.

The best way to accomplish this is to follow these steps:

1. Gather the required information.
2. Identify and analyse the activities.
3. Divide the activities into meaningful units or divisions.
4. Divide the unit's activities into meaningful tasks.
5. Assign authority and responsibility.
6. Obtain what is necessary and make the rules known.

Gather the required information

Information that is used in the planning process and all other information that may be necessary for reaching the objectives of the business must be gathered. There should be complete clarity on the objectives, aims, policies, prescriptions, plans and resources by which the business will operate. After this is done, the nature and extent of the duties that have to be organised are determined.

Example

The management of a furniture shop, giving due consideration to the budget, gathers information which will help to achieve the shop's objectives. This information is used by management in a systematic way in order to decide how the furniture shop's objectives will be achieved. All these activities take place within the framework of the business's policy prescriptions, while taking its available resources into account.

Identify and analyse the activities

Based on the nature and extent of the work, it can be determined which activities in the business should be executed in order to achieve the set objectives.

Management will analyse and investigate all the different activities to establish which activities are important to the furniture shop to ensure that it achieves its objectives.

Divide the activities into meaningful units or divisions

Related activities of the furniture shop are grouped together. If this is not done, the same kinds of activities may be performed by different people in different places.

When the activities are analysed, management makes sure that all related activities which could lead to the duplication of tasks are combined. In our example, this would mean the sorting of chairs and tables according to the type of wood, administrative tasks, and receiving delivery of the different types of chairs and tables. It is extremely important that these tasks are performed by the same people in the furniture shop to prevent the duplication of tasks.

Divide the unit's activities into meaningful tasks

The analysis and division of the activities must be taken a step further to determine precisely how many and what types of people will be required to carry out the work in each division.

This step is very important for the furniture shop so that management can determine precisely how many workers should be placed in a team. If the team comprises too many workers, labour costs will increase, and this may put the furniture shop's budget under pressure. However, if the team is too small, workers could feel that they cannot achieve the set objectives no matter how hard they work. In that case, the objectives are not seen as realistic and workers will not be motivated to try to achieve them.

Assign authority and responsibility

The authority and responsibility associated with each post must be precisely determined so that whoever fills a position knows exactly what their duties, authority and responsibilities are. Furthermore, the relationship between the different posts and divisions must be clearly set out in order to encourage liaison, interaction and cooperation.

All workers in the team are informed exactly what their responsibilities are, to whom they should report and from whom they may receive orders. In the furniture shop, the interaction between the different divisions is especially important.

Obtain what is necessary and make the rules known

Since the furniture shop function follows specific rules, everything should be prepared for the execution of the business's plans. However, these plans will only work if all the requirements (such as workers, equipment, procedures and budgets) are available at the right time and place. Thereafter, the business's rules must be introduced to the employees concerned so that the plans can be initiated and carried out in good time.

Management should pay particular attention to this step. It is very important for the workers to have the right equipment to ensure that production is not delayed by the use of incorrect or inadequate equipment. Workers must also be informed of any new work methods.

Organising is therefore the management task concerned with arranging the activities and resources of the business. The entrepreneur will carry out this management task by allocating duties, responsibilities and authority to their staff. The entrepreneur will also determine the relationships between the members of staff in order to promote cooperation, systematic performance of the work and achievement of objectives in the most efficient way.

2.3.4 Leading

As mentioned at the beginning of this chapter, the key to survival for every entrepreneur is leadership. Leadership has a direct influence on the success of a business. The term 'leadership' refers to the management function that guides people within a business in such a way that they voluntarily cooperate or work together to achieve the objectives of the business as effectively as possible. Leading consists of complex managerial activities, for example authority, power, delegation, responsibility and accountability.

Former US president Dwight D Eisenhower expressed the following view of leadership:

Quote

'There is a great difference between the ability to lead and the results of leadership. Hitler had an almost hypnotic magnetism – the power to lead – but he used it to … lead a nation to destruction …. The value of Winston Churchill's leadership is measured by his achievement.'

Source: Quoted in Rupert (1967: 37)

Eisenhower therefore distinguished between leadership ability on the one hand, and the consequences of leadership on the other. According to him, Hitler and Churchill both possessed leadership abilities but Hitler began a war with them, while Churchill created a stable order. Leaders should therefore be measured by the consequences of their leadership.

Tip

Warren Bennis, in his research for his book on leadership (Bennis 2004), interviewed 90 of the most effective, successful leaders in the US – 60 from corporations and 30 from the public sector. Bennis discovered a leadership and productivity gap, but also, and very importantly, a commitment gap. These gaps led him to the central question on leadership: how can the workforce be empowered and how can the potential of the workforce be unlocked? He believes that leaders do not pay enough attention to doing the right things, while they pay too much attention to doing things right.

Leadership competencies

Bennis (2004), identifies the following four leadership competencies that entrepreneurs today must have in order to be successful leaders:

- management of attention
- management of meaning

- management of trust
- management of self.

Management of attention

Leaders must have the ability to draw people to them, because they have a vision, a dream, a set of intentions, an agenda and a frame of reference. They communicate an extraordinary focus of commitment, which attracts people to them.

In an interview during a satellite broadcast to MBA students, Jack Welch (2002), the CEO of General Electric, once said: 'What I wanted to do inside GE was to touch every person. I wanted to get into their skin. I tried hard to make that connection, so that they cared the way I cared. Everyone, from the factories to headquarters.'

The leader brings into focus the vision that the business is trying to achieve and motivates the people in the business to achieve that vision through active contribution and wide-ranging discussion.

Management of meaning

To make their vision clear to others, and to align people with them, leaders must communicate their vision. Communication and alignment work together. In Jack Welch's words:

Quote

'I am not afraid to put ideas out there. But, you have to understand that these ideas are starting points, not endings. I love to throw ideas out like "Six Sigma". Get into the skin of every person so that they know that their ideas count. Celebrate small success. Evaluate the people down to the lowest units, so they know their achievements are constantly being measured and that they count. It's critical that people know their contributions matter. It's critical that they know what they do will be seen and rewarded.'

Source: Welch (2002)

Management of trust

Trust is essential to all businesses. The main feature of trust is reliability. Recent studies have shown that people would much rather follow individuals they can count on even when they disagree with their viewpoint, than people they agree with, but who often shift their viewpoints.

According to Brand Pretorius (2001: 4–5), retired Chief Executive of McCarthy Retail, '… managers should build on sound and shared values. Honesty and integrity, openness, respect for human dignity, equal opportunities, quality in everything we do, mutual trust and respect should be combined with teamwork, recognition for performance, participation and empowerment.'

Management of self

The fourth competency is management of self. This means knowing your own strengths and weaknesses. Management of self is vital; without it, leaders can do more harm than good.

Leaders know themselves; they know their strengths and cultivate them.

Leadership should be both dynamic and flexible. As an entrepreneur, you need to assess the abilities and experience of your workers regularly to decide which leadership style to adopt. If you adopt a suitable style, not only will your employees be more motivated, but they will also become more 'mature'. As they become more mature, the degree of direct supervision needed will decrease. Leadership is therefore seen as a function of the situation. In other words, in most cases the situation determines the leadership style that a manager should adopt. The leader must therefore be able to sum up a situation quickly and apply a suitable style.

2.4 The additional management functions

Apart from the four basic management tasks, there are six additional management tasks. These are summarised below.

2.4.1 Coordination

Coordination is the process by which the various functions in the business are treated as a functional unit so that its objectives can successfully be achieved. Among other things, it includes balancing and distributing tasks so that the best possible cooperation is attained.

2.4.2 Decision making

During decision making, various possible solutions are considered for problems and the best solution is chosen. A large number of different problem-solving techniques are used in practice.

Examples of problem-solving techniques (De Beer & Rossouw 2015: 120–121):

- **Fishbone diagrams** can be used meaningfully at the beginning of the problem-solving process because they are aimed at determining the causes of problems. This is done by grouping all possible causes in certain categories. The diagram looks like the bones of a fish, with the problem where the fish's head would be.
- **Brainstorming** is a technique used to get input from the members of staff who are involved in the problem. It takes the form of a group discussion in which staff members participate to find answers to questions regarding the problem.
- **Research** is usually undertaken by conducting interviews and using questionnaires. Problems can be identified by conducting interviews.
- In the **Nominal Group Technique** (NGT), the staff members involved are a group in name only. All the members act independently, and it is the ideas of each individual that are sought and not the ideas of the group as a whole.
- The **Delphi Technique** is the same as the NGT but does not require staff to be physically present at a certain place. The aim of this technique is to allow employees to discover problems and their appropriate solutions themselves.

2.4.3 Communication

Although we usually see and study people as individuals, we should not lose sight of the fact that people are social beings. People can only exist within the framework of social institutions and through contact and interaction with other people (De Beer & Rossouw 2015: 140–141). This interaction takes place by means of communication. Communication involves the transfer of messages between the business and its external and internal environment.

2.4.4 Motivation

Motivation is the process in which the entrepreneur and manager persuade the employees that they should voluntarily do their work as well as possible. Motivation originates when an individual experiences tension because of an unsatisfied need. This tension serves as the incentive for the conduct that one requires to satisfy the need. Motivation is a driving force that develops spontaneously in a person, but the entrepreneur and manager must strive to stimulate this driving force (De Beer & Rossouw 2015: 137–138).

2.4.5 Delegation

Delegation is the process whereby tasks are allocated to employees with the necessary power and responsibility to enable them to do the tasks. The entrepreneur's tasks are so inclusive and demanding that they cannot cope with everything themselves. The entrepreneur has to transfer some duties and responsibilities to other people in the business. This is known as 'delegation'.

2.4.6 Discipline

Discipline shapes the behaviour of employees so that their conduct helps to ensure the successful operation and achievement of the objectives of the business. Maintaining discipline involves people's feelings and emotions, and therefore discipline must be applied with great insight and fairness.

2.5 Managerial competencies

To be able to do all the management tasks and to be an effective manager you need to have the following managerial competencies:

- communication
- planning and administration
- teamwork
- strategic action
- global awareness
- self-management.

2.5.1 Communication

'Communication' refers to a person's competency to exchange, or transfer, information that leads effectively to understanding between two or more people.

Communication competency includes the following:

- **Informal communication** refers to the personal relationships that people build up in the workplace, for example a group of people might start a tea club. The communication between the members in the tea club can be regarded as informal communication.
- **Formal communication** is done through the official channels created by the entrepreneur, for example office memos, emails and official newsletters.

2.5.2 Planning and administration

These competencies involve deciding what tasks need to be done, determining how they can be done, allocating resources to enable them to be done and monitoring progress to ensure that they are done.

Planning and administration competencies include:

- information gathering, analysis and problem-solving
- planning and organising projects
- time management
- budgeting and financial management.

2.5.3 Teamwork

Teamwork is of the highest importance in the integrated approach to modern business structures today. Here we refer to networking, subcontracting, joint ventures, franchising and globalisation.

Teamwork competency includes:

- team design
- creating a supportive environment
- managing team dynamics.

2.5.4 Strategic action

Understanding the overall mission and values of the business, and ensuring that your actions and those of the people you manage are aligned with them, involves strategic action competency.

Strategic action competency includes:

- understanding the industry
- understanding the business
- taking strategic action
- visionary leadership.

2.5.5 Global awareness

Carrying out a business's managerial work by drawing on the human, financial, information and material resources from several countries, and serving markets that span several cultures, requires global awareness competency.

Global awareness competency includes:

- cultural knowledge and understanding
- cultural sensitivity.

2.5.6 Self-management

Self-management allows individuals to develop fully without blaming the situation for their misfortune or mistakes.

Self-management competency includes:

- integrity and ethical conduct
- personal drive
- balanced work and private life
- self-awareness and development.

2.6 Summary

The development of management has provided us with a framework that we can apply in our personal life, and which can be applied by the entrepreneur in their business.

Entrepreneurs must know where they fit into the management process and for what functions they are responsible. It is also important that entrepreneurs should know which managerial competencies are expected of them. Remember that management is the art of getting things done through other people.

Because of the integrated nature of management tasks, it is understood that entrepreneurs should have knowledge of the various functions in a business so that they can carry out their management tasks effectively. It is, therefore, the task of the entrepreneur to ensure that the business moves towards the achievement of the business's goals, such as prosperity (some businesses refer to this as 'maximising profit'), service to the community and providing security to employees.

Questions for self-evaluation

1. Define the concept of management.
2. Discuss the functions of management. Illustrate your answer by means of a diagram.
3. Explain the following concepts:
    - planning
    - organising

- leading
- control
- achievement of objectives

4. Draw up the following objectives for your own business:
   - long-term objectives
   - functional objectives (for your own department only)
   - operational objectives
   - individual objectives
5. Discuss the functional perspectives of management.
6. Explain the control process.
7. Briefly explain the steps in the business process.
8. Apply the different leadership competencies in your own life.
9. Describe the additional management functions.
10. Compare and assess the managerial competencies with your own life.

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The financial management function

CHAPTER 3

Learning outcomes

After studying this chapter, you should be able to:

- define and discuss financial management
- describe the role of the financial management function
- distinguish between the types of financial statements
- prepare a statement of the financial position and a statement of comprehensive income
- define and discuss the tools of financial planning
- demonstrate an understanding of the statement of financial position and the statement of comprehensive income
- demonstrate an understanding of the cash flow statement
- calculate the cost of goods sold or cost of sales
- calculate and interpret different financial ratios in terms of liquidity, profitability, activity and leverage
- forecast profits
- forecast financial statements using pro formas
- define and discuss cost-volume-profit analysis
- calculate break-even point in units and rands
- define and discuss different sources of finance for small businesses
- define and discuss forms of credit and credit collection methods
- define and discuss cash flow planning techniques
- prepare a cash flow plan.

3.1 Introduction

Finance, in a real sense, is the cornerstone of the enterprise system because good financial management is important for the economic health of the firm, the nation and the world. Because of its importance, finance should be widely and thoroughly understood. The field of financial management is relatively complex, and it is undergoing constant change in response to shifts in economic conditions. This makes finance stimulating and exciting, but also challenging and sometimes perplexing. However, success when starting your own business often comes down to understanding risks, developing a realistic plan, managing finances well and effectively marketing what you have to sell. In this chapter, we will discuss the basic issues of financial management.

3.1.1 What is financial management?

Financial management involves the strategic planning and budgeting of short- and long-term funds for current and future needs. The tracking of past financial transactions, controlling current revenues and expenses, and planning for the future financial needs of the firm are the foundation of financial management. To accomplish this, financial management uses financial statements that reflect the financial position of a business with the main objective of identifying its relative strengths and weaknesses. This process allows the user of these statements to plan and forecast future financial performance for capital needs, produce a statement of the financial position requirements (such as non-current and current assets), as well as plan for a good return on what the owner of the business has invested.

Financial management in the small business is characterised by different problems and opportunities from those of large companies. One difference is that most small businesses do not have the opportunity to sell their shares to the public, or to issue bonds in order to raise capital. A 'share of stock' is a certificate that acts as evidence of ownership in a corporation. Although not always the case, stocks of many businesses are traded on organised security exchanges such as the New York Stock Exchange and the Johannesburg Stock Exchange. Bonds are debt instruments sold by a company to investors. Investors in bonds hold these instruments for long periods of time, often from 5 to 20 years, in exchange for interest income on a regular basis and the repayment of the principal amount at maturity. A bond is different from a share of stock because it represents a promise by the firm to repay a certain amount of money at a future date. Big companies are able to raise capital quickly when intending to expand their operations by issuing shares or bonds to potential investors.

The entrepreneur who runs a smaller business must rely primarily on trade credit, which is an important form of finance for businesses and is mainly in the form of supplier's credit payable in at least 30, 60 or 90 days. In some instances, the bank provides financial support in the form of bank loans or overdrafts. It should be noted that the bank will usually ask the owner of the business to provide some form of security on the money lent to the business. This security can be in the form of any business asset or asset owned by the owner that the bank considers to be of value.

Other forms of financing small business are lease financing, hire purchase agreements (eg purchase of office furniture), instalment sale agreements (eg purchase of a motor vehicle), personal equity and personal loans from the owner, friends or relatives. A small business, therefore, faces a much more severely restricted set of financing alternatives than those available to a large corporation.

On the other hand, many financial problems facing a small business are very similar to those facing larger corporations. For example, when purchasing heavy machinery or entering into a lease agreement, it is essentially the same process that is used, regardless of the size of the business. Once the decision is made, the financing alternatives available to the business may be radically different, but the decision-making process will generally be similar.

3.2 Understanding financial statements

Financial statements record the performance of your business and will allow you to diagnose its strengths and weaknesses by providing a written summary of all financial activities during a specific period. In addition, financial statements are a structured presentation of the financial position and financial performance of an entity. These are useful to a wide range of entities and also to users when making economic decisions. There are two primary types of financial statements: the statement of financial position and the statement of comprehensive income. Table 3.1 shows the changes effected by the International Financial Reporting Standards (IFRS) in 2009:

Table 3.1: Changes in International Financial Reporting Standards

Exhibit 1: Complete set of financial statements	
Previous name	**New name**
Income statement	→ Statement of Comprehensive Income
Balance sheet	→ Statement of Financial Position
Statement of retained earnings	→ Statement of Changes in Equity
Statement of cash flows	→ Statement of Cash Flows

Source: PricewaterhouseCoopers (2008)

3.2.1 The statement of financial position

The statement of financial position provides a picture of the finances or capital of a business at a given time, usually at the close of an accounting period. The accounting period usually covers 12 months, but businesses can choose to report on a quarterly, half-yearly or annual basis. The statement of financial position lists in detail the tangible and intangible items that the business owns (known as its 'assets') and what money the business owes, either to its creditors ('liabilities') or to its owners ('shareholders' equity' or 'net worth' of the business).

Defining main items on the statement of financial position of the firm

Assets are anything the business owns that has monetary value. Assets include not only cash, merchandise or inventory (stock), land, buildings, equipment, machinery, furniture, patents, trademarks and the like, but also money due from individuals or other businesses (known as accounts or notes receivable). Assets are divided into the following categories:

- ***Current assets*** include cash, government securities, marketable securities, accounts receivable, inventories or stock, prepaid expenses (these are expenses to be incurred in the future but paid for in advance) and any other item that could be converted into cash within one year in the normal course of business.
- ***Non-current assets*** are assets acquired for long-term use in a business, such as land, building, plant, equipment, machinery, leasehold improvements, furniture, fixtures and any other items with an expected useful business life measured in years (as opposed to items that will wear out, or be used up in less than one year and which are usually recorded as expenses when they are purchased). Non-current assets are typically not for resale and are recorded in the statement of financial position at their net cost less accumulated depreciation.
- ***Other assets*** include intangible assets, such as patents, royalty arrangements, copyrights, licences and notes receivable from managers and employees.

Liabilities are funds acquired for a business through loans or the purchase of property or services by the business on credit. Creditors do not acquire business ownership, but instead receive promissory notes to be paid at a designated future date. Liabilities are the claims of creditors against the assets of the business (debts owed by the business). Liabilities are also divided into similar categories to assets, namely, current liabilities and non-current liabilities.

- ***Current liabilities*** are accounts payable, notes payable to banks, accrued expenses (wages, salaries), taxes payable, the current portion (due within one year) of long-term debt and other obligations owing to creditors due within one year.
- ***Non-current (long-term) liabilities*** are amounts owed by the company over long periods of time. Examples include mortgages, intermediate and long-term bank loans, equipment loans and any other obligation for money due to a creditor with a maturity longer than one year.

Owners' equity represents the investment that owners of small businesses have made in the company in the form of capital. On the statement of financial position, it is represented by the difference between the total assets of the business and its total liabilities. Owners' equity is sometimes referred to as 'net worth'. There are two main items that make up the owner's equity, namely profit/loss and capital. If the small business records a profit, owner's equity increases, while it decreases as the small business records a loss. The owner's equity is the investment by the owner plus any profits, or minus any losses, that have accumulated in the business over the years. At any given time, a business's assets equal the total contributions by the creditors and owners, as illustrated by the following formula for the statement of financial position:

Assets = Owner's Equity + Liabilities

This formula is known as the **accounting equation**, and it is the basic premise of accounting. If a business owes more money to creditors than it possesses in value of assets owned, the net worth, or owner's equity, of the business will be a negative number.

Below is an example of a statement of financial position. This is a statement of financial position for Exxaro as at the 31 December 2013 and 2014 respectively. From the statement of financial position, we can learn that Exxaro had total assets of R47 429 million on 31 December 2014 and R49 506 million in 2013. It should be noted that the financial position of the business changes on a daily basis; hence statements of financial position are always 'as of a particular date'. You can also see the difference between the financial position at the 31 December 2013 and on the same date in 2014.

We can also learn from the statement of financial position that the shareholders of Exxaro have R34 425 000 in equity in the financial period of 2014 which is different from R36 272 000 in 2013. Since the business has recorded a loss in 2014, the equity has declined. Exxaro has also borrowed funds from creditors on a long-term basis, amounting to R9 182 000, and also a further R3 590 000 repayable in the short term (in the financial period 2014).

Table 3.2: Summarised statement of financial position

Summarised statement of financial position (Rm) for Exxaro		
At 31 December	**2014 Rm**	**2013 Rm**
ASSETS		
Non-current assets	**41 408**	**44 681**
Property, plant and equipment	18 344	20 342
Biological assets	84	72
Intangible assets	34	1 176
Investments in associates	18 588	19 207
Investments in joint ventures	966	861
Financial assets	2 853	2 657
Deferred tax	539	366
Current assets	**5 693**	**4 483**
Inventories	998	938
Trade and other receivables	2 611	2 434
Current tax receivable	78	82
Cash and cash equivalents	2 006	1 029
Non-current assets held-for-sale	**328**	**342**
Total assets	**47 429**	**49 506**
EQUITY AND LIABILITIES		
Capital and other components of equity		
Share capital	2 409	2 396
Other components of equity	6 031	4 234
Retained earnings	25 985	29 668
Equity attributable to owners of the parent	**34 425**	**36 298**
Non-controlling interests		**(26)**
Total equity	**34 425**	**36 272**
Non-current liabilities	**9 182**	**9 157**
Interest-bearing borrowings	2 976	3 569
Non-current provisions	2 219	1 863
Post-retirement employee obligations	167	149

Financial liabilities	88	95
Deferred tax	3 732	3 481
Current liabilities	**3 590**	**3 852**
Trade and other payables	3 208	2 867
Interest-bearing borrowings	34	31
Current tax payable	27	131
Current provisions	254	17
Overdraft	67	806
Non-current liabilities held for sale	**232**	**225**
Total equity and liabilities	**47 429**	**49 506**

Source: Exxaro (2014)

The statement of financial position is designed to show how the assets, liabilities and owner's equities of a business are distributed at any given time. It is usually prepared at regular intervals, for example at each month's end, but especially at the end of each financial (accounting) year. A financial period of a business is like a person's birthday.

By regularly preparing this summary of the statement of the financial position of what the business owns and owes, the entrepreneur can identify and analyse trends in the financial strength of the business. It permits timely modifications, such as gradually decreasing the amount of money the business owes to creditors and increasing the amount the business owes its owners.

All statements of financial position contain the same categories of assets, liabilities and net worth. Assets are arranged in decreasing order of how quickly they can be turned into cash (liquidity). Liabilities are listed in order of how soon they must be repaid, followed by retained earnings (net worth or owner's equity). The categories and format of the statement of financial position are established and regulated by systems such as International Financial Reporting Standards (IFRS) and South African Generally Accepted Accounting Principles (SA GAAP) depending on the size and nature of the business. The systems are applied to all companies, large or small, so anyone reading the statement of financial position can readily understand the story it tells.

It should be noted that as from 1 January 2005, all companies listed on the Johannesburg Stock Exchange are required to comply with the requirements of IFRS. South African statements of GAAP are entirely consistent with IFRS, although there may be a delay between issuance of an IFRS and the equivalent

South African statement of GAAP. Furthermore, following significant worldwide demand by users, the South African Institute of Chartered Accountants (SAICA), in consultation with the International Accounting Standards Board (IASB), published an International Financial Reporting Standard (IFRS) for Small and Medium Enterprises (SMEs) on 9 July 2009 (SAICA 2010). This is the first set of international accounting requirements developed specifically for SMEs. The final IFRS for SMEs have been simplified to reflect the needs of users, and so they are less complex and more cost-effective for SMEs.

3.2.2 The statement of comprehensive income

The second primary report included in a business's set of financial statements is the statement of comprehensive income. Sometimes referred to as a 'statement of income and expenditure' or 'statement of profit and loss'. The statement of comprehensive income shows a company's sales and expenses over a specific period. It is also prepared at regular intervals (usually on a monthly, quarterly, half-yearly or annual basis) to show the results of operation during a specific accounting period. Just as discussed in the section on the statement of the financial position, it also follows GAAP and contains specific revenue and expense categories, regardless of the nature of the business. It must be noted that the statement of comprehensive income will differ from business to business. Manufacturing, mining and service companies will have different items on their statement of comprehensive income.

Table 3.3 is an example of the statement of comprehensive income for Exxaro:

Table 3.3: Statement of comprehensive income

Summarised statement of comprehensive income (Rm) for Exxaro		
For the year ended 31 December	**2014 Rm**	**2013 Rm**
Revenue	16 401	13 568
Operating profit	1 204	992
Other income	1 466	1 594
Impairment charges of non-current assets	(5 962)	(143)
Net operating (loss)/profit	**(3 292)**	**2 443**
Net financing cost	(103)	(286)
Income from financial assets	9	12
Share of income from equity-accounted investments	2 515	3 631
(Loss)/profit before tax	**(871)**	**5 800**

Income tax expense	(13)	(645)
(Loss)/profit for the year from continuing operations	**(884)**	**5 155**
Profit for the year from discontinued operations		**1 049**
(Loss)/profit for the year from continuing operations	(884)	6 204
Other comprehensive income, net of tax	1 190	2 640
Items that will not be classified to profit or loss:	316	150
Share of comprehensive (loss)/income of equity-accounted investments	316	150
Items that may be subsequently reclassified to profit or loss:	1506	2490
Unrealised gains on translating foreign operations	224	537
Revaluation of available-for-sale financial assets	345	100
Share of comprehensive income of equity-accounted investments	937	1853
Total comprehensive income for the year	**306**	**8 844**
Attributable (losses)/earnings per share (cents)		
– Basic	(249)	1 751
– Diluted	(248)	1 746
Headline earnings per share (cents)		
– Basic	1 372	1 463
– Diluted	1 368	1 459

Source: Exxaro (2014)

Calculating the cost of sales

Calculation of the cost of sales (sometimes referred to as the 'cost of goods sold' in the statement of comprehensive income) varies depending on whether the business is in retailing, wholesale or manufacturing.

- **Retailing and wholesaling:** calculating the cost of sales during the accounting period involves beginning and ending inventories. This includes purchases made during the accounting period. This is illustrated using an example:

Example

M & B Wholesalers ended the month with the following stock figures and purchases done during the month of December:

• Opening stock on 1 December	R345 000
• Closing stock on 31 December	R124 657
• Purchases done during the month of December	R456 700
• Damaged stock items	R 45 768

To calculate cost of sales, we will adopt the following procedure:

Opening stock	R345 000
Add: purchases	R456 700
Total stock available	R801 700
Less: damaged stock	R 45 768
Less: closing stock	R124 657
Cost of sales	**R631 275**

- **Manufacturing businesses:** calculating cost of sales involves not only finished goods inventories, but also raw materials inventories, work in process inventories, direct labour and direct factory overhead costs.

Work in process involves accounting for those manufactured goods that were incomplete at the end of the previous manufacturing cycle, which will be completed in the current cycle. Remember that some of these goods might be 10% complete and others 90% complete. For our example, we shall assume that they are at a similar stage of completion just to simplify our calculations.

It should be remembered that the factory might also want to make a profit when it completes the manufacturing process. This is when the factory is a profit centre rather than just a cost centre.

Example

A & Z (Pty) Ltd ended the month with the following stock figures and purchases done during the month of December:

• Opening finished goods inventory on 1 December	R450 000
• Closing finished goods inventory on 31 December	R124 000
• Opening raw materials inventory on 1 December	R345 000
• Closing raw materials inventory on 31 December	R240 650
• Opening work in process (*wip*) on 1 December	R305 000
• Closing work in process on 31 December	R120 600
• Raw material purchases done during the month of December	R956 700
• Factory labour and related factory overheads	R795 700
• Factory profit mark-up of cost	15%

To calculate cost of sales, we will adopt the following procedure:

Opening stock (raw materials)	R 450 000	
Add: raw material purchases	+ R 956 700	
Total stock available	R1 406 700	
Less: Closing stock (raw materials)	– R 240 650	R1 166 050
Add: Factory labour and related overheads		+ R 795 700
		R1 961 750
Work in process (1 December 2005)	R 305 000	
Less: work in process (31 December 2005)	– R 120 600	
Work in process transferred to finished goods		+ R 184 400
Factory cost of sales		R2 146 150
Add: profit margin of 15% (multiply by 15% or 0.15)		+ R 321 923
Transferred to Company Trading Account		**R2 468 073**

Regardless of the calculation for cost of sales, this figure is deducted from net sales to get gross profit.

3.3 Financial ratio analysis

The statement of financial position and statement of comprehensive income are essential for financial ratio analysis, and they are the starting point for successful financial management. Applying ratio analysis to financial statements (statement of comprehensive income, statement of financial position, statement of cash flow) enables you to analyse the success or failure and the progress of your business.

Ratio analysis enables the entrepreneur to spot trends in a business and to compare its performance and condition with the average performance of similar businesses in the same industry. You may compare your own ratios for several successive years, watching especially for any unfavourable trends that may be developing and then compare your ratios with the averages of businesses similar to yours. Ratio analysis may provide the all-important, early-warning indications that allow you to solve your business's problems before it is destroyed by them.

Important statement of financial position ratios measure liquidity and solvency (a business's ability to pay its bills as they become due) and leverage (the extent to which the business is dependent on creditors' funding). They include the ratios discussed below and we will use the information from the financial statements of Exxaro to demonstrate the calculations.

3.3.1 Liquidity ratios

These ratios indicate the ease of turning assets into cash. They include the current ratio, quick ratio and working capital.

Current ratio

This is one of the best-known measures of the business's financial strength. It is calculated as shown below:

$$\textit{Current Ratio} = \frac{\textit{Current Assets}}{\textit{Current Liabilities}}$$

For 2014:

The Current Ratio = R5 693 000 ÷ R3 590 000 = 1.59:1

The main question this ratio addresses is: 'Does your business have enough current assets to meet the payment schedule of its current debts with a margin of safety for possible losses in current assets, such as inventory shrinkage or collectable accounts?' A generally acceptable current ratio is 2:1. This means that the business must have current assets that can pay twice of its current liabilities. But whether or not a specific ratio is satisfactory depends on the nature of the business and the characteristics of its current assets and liabilities. The minimum acceptable current ratio is obviously 1:1, but that relationship is usually playing it too close for comfort.

If you learn through ratio analysis that the business's current ratio is too low, you may be able to raise it by:

- settling some debts

- increasing your current assets from loans or other borrowings with a maturity of more than one year
- converting non-current assets into current assets
- increasing your current assets from new equity contributions
- putting profits back into the business.

Quick ratio

The quick ratio is sometimes called the ‘acid test’ ratio, and it is one of the best measures of liquidity. It is calculated as shown below:

$$\textit{Quick Ratio} = \frac{\textit{Current Assets} - \textit{Inventory}}{\textit{Current Liabilities}}$$

$$= (\text{R5 693 000} - \text{R998 000}) \div \text{R3 590 000}$$

$$= \text{R 4 695 000} \div \text{R3 590 000}$$

$$= 1.31:1$$

The quick ratio is a much more exacting measure than the current ratio. By excluding inventories, it concentrates on the real liquid assets, with value that is fairly certain. It helps answer the question: ‘If all sales revenues should disappear, could my business meet its current obligations with the readily convertible “quick” funds on hand?’

An acid test of 1:1 is considered satisfactory, unless the majority of your ‘quick assets’ are in accounts receivable and the pattern of accounts receivable collection lags behind the schedule for paying current liabilities.

Working capital

This is more a measure of cash flow than a ratio. The result of this calculation must be a positive number. It is calculated as shown below:

$$\textit{Working Capital} = \textit{Total Current Assets} - \textit{Total Current Liabilities}$$

$$= \text{R5 693 000} - \text{R3 590 000} = \text{R2 103 000}$$

Bankers look at net working capital over time to determine a company’s ability to weather financial crises. Loans are often tied to minimum working capital requirements. A general observation about these three liquidity ratios is that the higher they are, the better, especially if you are relying to any significant extent on creditor money to finance assets.

3.3.2 Profitability ratios

The following important state-of-income ratios measure profitability.

Gross profit margin ratio

This measures the percentage of sales in rands left after subtracting the cost of goods sold from net sales. It measures the percentage of sales in rands remaining (after obtaining or manufacturing the goods sold) or available to pay all the overhead expenses of the company. Comparison of your business ratios to previous performance or to the ratios of similar businesses will reveal the relative strengths or weaknesses in your business. The gross profit margin ratio is calculated as follows:

$$\textit{Gross Profit Margin} = \frac{\textit{Gross Profit}}{\textit{Sales}}$$

For example: The first three lines on the Trailer-4-u statement of comprehensive income are as follows:

Net sales	R950 000.00
Cost of sales	R250 000.00
Gross profit	R700 000.00

Gross profit margin ratio

The formula for Trailer-4-u

Gross Profit ÷ Net Sales x 100

R700 000 ÷ R950 000 x 100 = 74%

A 74% gross profit margin ratio says that for every rand of sales, Trailer-4-u has a gross profit of 74 cents. This means that the business has 74 cents on the rand to cover its operating costs and to earn profit.

The relationship between gross profit and net sales – as measured by the gross profit margin – is one of the most important measures used by managers, investors and creditors to assess the performance of a company.

Net profit margin ratio

An important use of the statement of comprehensive income is to evaluate the profitability of your business. This ratio measures the percentage of net income to sales or revenues. It provides a good opportunity to compare your company's 'return on sales' with its own previous performance or with the performance of other companies in a similar industry. If the profit margin is high, this generally means that the company is generating revenues and is also controlling its costs. A decrease in profit margin may indicate the company is having trouble in controlling certain costs. The net profit margin ratio is calculated as follows:

Profit Margin = Net Profit or Net Income ÷ Sales

For example: Using information from the statement of comprehensive income of Trailer-4-u on the 31 December 2015

The formula for Trailer-4-u

Profit Margin = Net Profit ÷ Sales x 100

= R180 120 ÷ R950 000 x 100 = 19%

Return on assets ratio

The return on assets ratio is a measure of a business's success in earning a return for all providers of capital (investors). This measures how efficiently profits are being generated from the assets employed in the business when you compare the business with its own previous performance or with businesses in a similar industry. A low ratio in comparison with industry averages indicates an inefficient use of business assets. Therefore, the return on assets ratio is calculated as follows:

$$\textit{Return on Assets Ratio} = \frac{\textit{Net profit + (Net Interest Expense)}}{\textit{Total Assets}}$$

$$= \frac{(\text{R306 000} + \text{R183 000})}{\text{R47 429 000}} \times 100 = 1.03$$

Return on assets ratio is the broadest rate of return ratio because it considers the investment made by all providers of capital, from short-term creditors to bondholders to stockholders.

Return on equity (ROE) ratio

The ROE, sometimes referred to as the ROI (return on investment), is perhaps the most important ratio of all. It is the percentage of return on funds invested in the business by the entrepreneur. In short, this ratio tells the entrepreneur whether or not all the money and effort put into the business has been worthwhile. If the ROE is less than the rate of return on an alternative, risk-free investment, such as a bank savings account, the entrepreneur may be wiser to sell the company, put the money into such a savings instrument, and avoid the daily struggles of managing a business.

The ROE is calculated as follows:

$$\textit{Return on Equity} = \textit{Net Profit} \div \textit{Owner's Equity}$$

$$= \frac{\text{R306 000}}{\text{R34 425 000}} \times 100$$

$$= 0.89$$

3.3.3 Activity or turnover ratios

Inventory turnover ratio

This ratio reveals how well inventory is being managed. It is important, because the more times inventory can be turned in a given operating cycle, the greater the profit. The inventory turnover ratio is calculated as follows:

$$\text{Inventory Turnover} = \frac{\text{Cost of Sales}}{\text{Average Inventory}}$$

$$= \frac{\text{R15 197 000}}{(\text{R998 000} + \text{R938 000})} \div 2$$

$$= 15.7:1$$

Accounts receivable turnover ratio

This ratio indicates how well accounts receivable are being collected. If receivables are not collected reasonably in accordance with their terms, management should rethink its collection policy. If receivables are excessively slow in being converted to cash, liquidity could be severely impaired. You will be able to calculate the accounts receivable if you know the provision for credit sales. The accounts receivable turnover ratio is calculated as follows:

$$\text{Accounts Receivable Turnover} = \frac{\text{Credit Sales}}{\text{Accounts Receivable}}$$

When the accounts receivable turnover is very slow, it takes a long time before the business is able to convert a credit sale into cash. This increases the number of days outstanding, or average collection period. This is calculated as follows:

$$\text{Average Collection Period} = \frac{\text{Accounts Receivable}}{\text{Daily Credit Sales}}$$

The liquidity, leverage, profitability and management ratios allow the entrepreneur to identify trends in a business and to compare its progress with the performance of others through data published by various sources. The owner may thus determine the business's relative strengths and weaknesses. You will be able to calculate the accounts receivable if you know the provision for credit sales.

3.3.4 Leverage or debt ratios

Leverage, or debt ratios, show the level of use of borrowed funds by the business. Small and medium enterprises (SMEs) do not use a lot of borrowed capital due to lack of access to it. There are a number of ratios that we will look at in this section, which all illustrate different aspects of leverage, or indebtedness of a small business.

Debt ratio

The debt/worth, or leverage ratio indicates the extent to which the business is reliant on debt financing (creditor money versus owners' equity):

$$\textit{Total Debt Ratio} = \frac{\textit{Total Assets} - \textit{Total Equity}}{\textit{Total Assets}}$$

$$= \frac{\text{R47 429 000} - \text{R34 425 000}}{\text{R47 429 000}} \times 100 = 27\%$$

Generally, the higher this ratio, the more risky a creditor will perceive their exposure in your business, making it correspondingly harder to obtain credit.

Gearing ratio

This ratio provides information regarding the extent to which the company has used long-term debt in its capital structure.

$$\textit{Gearing Ratio} = \frac{\textit{Long-term Debt}}{\textit{Long-term Debt} + \textit{Total Equity}}$$

$$= \frac{\text{R9 182 000}}{\text{R9 182 000} + \text{R34 425 000}} \times 100 = 21.06\%$$

This ratio looks at all the different types of long-term debt, like mortgages, bonds, loans, etc. The total of long-term debt is then compared with the total of long-term debt and equity. You may ask: why add the two for comparison? Remember that the business is an ongoing concern and the intention is to operate for a long time. The owners of the business have therefore taken on a lot of risk in the business (owners' equity), and long-term debt holders have also assumed a lot of risk in the long-term survival of the business. By calculating the gearing ratio you will get an indication of the extent to which debt holders have assumed this risk in the long term. From the calculations above, you will see that about 21.06% of the organisation's activities are financed through long-term debt.

Times interest earned ratio

This ratio looks at the small business's ability to service interest payments on borrowed funds. It compares profits generated before interest and taxes are paid, to the interest incurred.

$$\textit{Times Interest Earned} = \frac{\textit{Earnings before Interest and Tax}}{\textit{Interest Expense}}$$

$$= \frac{\text{R3 292 000}}{\text{R103 000}}$$

$$= 32\%$$

Debt to equity ratio

This ratio provides information similar to that provided by the gearing ratio.

$$\textit{Debt to Equity Ratio} = \frac{\textit{Total Assets} - \textit{Total Equity}}{\textit{Total Equity}}$$

$$= \frac{R47\ 429\ 000 - R34\ 425\ 000}{R34\ 425\ 000} \times 100 = 38\%$$

The ratio compares the risk assumed by shareholders or members of the small business with the risk assumed by all the creditors.

3.3.5 Break-even analysis

'Break-even' means a level of operations at which a business neither makes a profit nor sustains a loss. At this point, revenue is just enough to cover expenses. Break-even analysis enables you to study the relationship of volume, costs and revenue.

Break-even requires the entrepreneur to define a sales level, either in terms of revenue in rands to be earned or in units to be sold within a given accounting period, at which point the business would earn a before-tax net profit of zero. There are various calculations available to determine this point, based on the business's estimated sales volume, fixed costs and variable costs.

Generally, the volume and cost estimates assume the following conditions:

- a change in sales volume will not affect the selling price per unit
- fixed expenses (rent, salaries, administrative and office expenses, interest and depreciation) will remain the same at all volume levels
- variable expenses (cost of goods sold, variable labour costs, including overtime wages and sales commissions) will increase or decrease in direct proportion to any increase or decrease in sales volume.

Two methods are generally employed in break-even analysis, depending on whether the break-even point is calculated in terms of sales volume (in rands), or in the number of units that must be sold. In the case of rand sales volume, we would normally calculate, in the first instance, the break-even in units, and then multiply that value by the unit selling price. All fixed expenses are first calculated and then this amount is divided by a unit contribution margin. A unit contribution margin is the difference between a product's unit selling price and unit variable cost.

The second method requires that you calculate the contribution margin ratio, which is then used to calculate the break-even value in rand terms.

Break-even point calculation using unit contribution margin

We will illustrate this by using an example:

Example

Priem Enterprises buys widgets from its suppliers for R2.50 each and sells them for R5.00 each. It incurs an overhead cost of R300 000 per month and also pays its sales representatives a commission of R0.50 for each product sold.

Using these figures, we can calculate the break-even point in units as follows:

We have to add the unit cost to the commission as these constitute the variable costs per unit.

Contribution margin is R5.00 – (R2.50 + R0.50)
= R5.00 – R3.00 = R2.00 per unit.

Break-even in units = fixed costs ÷ contribution margin per unit
= R300 000 ÷ R2.00 = 150 000 units.

Break-even in rands = 150 000 units x unit selling price
= 150 000 x R5 = R750 000.

At this point where the business is able to generate R750 000, it does not incur any loss or generate any profit, but the business is sure of surviving. At this point the business can settle its cost of sales and its operating expenses.

Break-even point calculation using contribution margin

The steps for calculating break-even using contribution margin ratio are as follows:

- Obtain a list of expenses incurred by the company during its past fiscal year.
- Separate these expenses listed into either a variable or a fixed expense classification.
- Express the variable expenses as a percentage of sales.

Example

Priem Enterprises has sales of R500 000 per month, fixed expenses of R300 000 and incurs the following variable costs:

Cost of sales	R250 000
Commissions	R 50 000

Therefore, variable expenses are 60% of net sales (R300 000 divided by R500 000 × 100). This means that 60 cents of every sales rand is required to cover variable expenses. Only the remainder, 40 cents of every rand, is available for fixed expenses and profit.

It means that the company needs the following rand sales to break even:

Break-even (in rands) = R300 000 divided by 40% = R750 000.
Break-even (in units) = R750 000 divided by unit selling price
= R750 000 ÷ R5 = 150 000 units.

In the above example, Priem Enterprises is making a loss at this level of sales, since its total sales are only R500 000 and yet it requires at least R750 000 in sales just to break even.

3.4 Financial planning

Studies overwhelmingly identify bad management as the leading cause of business failure. Bad management translates to *poor planning by management*.

All too often, entrepreneurs are so caught up in the day-to-day tasks of getting the product out of the door and struggling to collect receivables to meet the payroll, that they do not plan. There never seems to be time to prepare pro formas or budgets. Often, entrepreneurs understand their products, but not the financial statements or the bookkeeping records, which they feel are for the benefit of the tax authorities, such as the South African Revenue Service (SARS), or the bank. Such overburdened entrepreneurs can scarcely identify what will affect their businesses next week, let alone over the coming months and years. But, you may ask, 'What should I do? How can I, as an entrepreneur, avoid getting bogged down? How can I ensure success?'.

Important

Success may be ensured only by focusing on all factors affecting a business's performance. Focusing on planning is essential for survival.

Financial planning affects how and on what terms you will be able to attract the funding required to establish, maintain and expand your business. Financial planning determines the raw materials that you can afford to buy, the products that you will be able to produce and whether or not you will be able to market them efficiently. It affects the human and physical resources that you will be able to acquire to operate your business. It is a major determinant of whether or not you will be able to make your hard work profitable.

This section provides an overview of the essential components of financial planning and management. Used wisely, it will make the reader (the entrepreneur) familiar enough with the fundamentals to have a fighting chance of success in today's highly competitive business environment.

A clearly conceived, well-documented financial plan, establishing goals and including the use of pro forma statements and budgets to ensure financial control, will demonstrate not only that you know *what* you want to do, but that you know *how* to accomplish it. This demonstration is essential to attract the capital your business requires from creditors and investors.

3.4.1 Tools of financial planning

The following tools can be used as part of the financial planning process:

- **Pro forma financial statements** – these represent a forecast of the statement of financial position and a comprehensive statement of income (usually based on the previous year's financial statements). In the preparation of these, the entrepreneur might want to make a few assumptions about the growth forecast for the business, return on their investment (profit for the year) and the relationship between the various components of each financial statement (eg selling expenses consist of 7% of total revenue).
- **Ratio analysis** – a means by which individual business's current performance is compared to its previous performance or similar businesses in the same category. By calculating financial ratios, the business can then use industry or historical figures as a benchmark or standard.
- **Break-even analysis** – a method allowing the small business owner to calculate the sales level at which a business recovers all its costs or expenses.
- **Pro forma cash flow statement** – identifies the different sources and uses of cash for a particular financial year. As discussed earlier, the cash flow statement consists mainly of three categories:
  - *Cash from operating activities* – from a planning perspective, the entrepreneur can plan in advance what portion of the cash needed will be sourced from operating activities like sales of goods. They can also plan the expenditure pattern in advance for salaries, cost of sales, etc.

- *Cash generated from investing activities* – the entrepreneur can plan for purchases of non-current assets and the disposal of some of these during the financial year. These figures will also form part of the capital expenditure budget (sometimes referred to as a 'CAPEX budget').
- *Cash generated from financing activities* – these are the different sources of capital, which include, but are not limited to, bank loans and capital injection by shareholders. By planning, the entrepreneur can forecast borrowing needs in advance. This can help reduce expenses, because interest charged by banks is usually high when the loan is made in an emergency, rather than by prior arrangement, for example, in the form of a line of credit or overdraft limit.

- **Pricing formulas and policies** – used to calculate profitable selling prices for products and services. A 25% mark-up policy is an example of this.

The entrepreneur who understands these concepts and uses them effectively to control the evolution of the business is practising sound financial management, thereby increasing the likelihood of success.

Short-term planning is generally concerned with profit planning or budgeting. Long-term planning is generally strategic, setting goals for sales growth and profitability over a minimum of three to five years. We shall look at these two concepts briefly in turn.

3.4.2 Short-term financial planning

There is one simple reason for observing and understanding financial planning in your business – to avoid failure. Eight out of ten new businesses fail primarily because of the lack of good short-term financial planning.

The tools for short- and long-term plans have been explained previously. In most cases, the words 'short-term financial planning' and 'working capital management' are used interchangeably. This is very useful if we can understand what is meant by working capital. This refers to the short-term resources that we need to manage the business on a daily basis. Examples are discussed in this section. Our approach in this section is how to manage short-term financial planning, or working capital management. This is an area of particular concern for the entrepreneur. The business's short-term plan should be prepared on a monthly basis for a year into the future, employing the pro forma income statement and cash flow budget.

Working capital includes cash, debtors, creditors and the management of stock. The entrepreneur should have a good understanding of the difference between current assets (cash and cash equivalents, debtors, stock, prepaid expenses) and current liabilities (creditors, overdrafts, accrued expenses, short-term loans). This is referred to as 'net working capital' and is also defined as the difference between current assets and current liabilities. Lack of control of this crucial measure is a primary cause of business failure in both small and large firms. Let us discuss some of the important components of working capital.

Cash and cash equivalents

The most liquid form of current assets, cash and cash equivalents (usually marketable securities or short-term certificates of deposit) require constant supervision. A well-planned and maintained cash budgeting system is essential to answer key questions such as: Is the cash level adequate to meet current expenses as they come due? What are the timing relationships between cash inflows and outflows? When will the peak cash needs occur? What will be the magnitude of bank borrowing required to meet any cash shortfalls? When will this borrowing be necessary and when may repayment be expected?

Accounts receivable

Almost all businesses are expected to extend credit to their customers. Key issues in this area include: Is the amount of accounts receivable (debtors) reasonable in relation to sales? On average, how rapidly are accounts receivable being collected? Which customers are 'slow payers'? What action should be taken to speed up collections where needed?

Inventories

Inventories (trading stock) often make up 50% or more of a business's current assets, and therefore are deserving of close scrutiny. Key questions that must be considered in this area include: Is the level of inventory reasonable in relation to sales and the operating characteristics of the business? How rapidly is inventory turned over in relation to other companies in the same industry? Is any capital invested in dead or slow-moving stock? Are sales being lost due to inadequate inventory levels? If appropriate, what action should be taken to increase or decrease inventory?

Accounts payable

In a business, trade credit often provides a major source of financing. Key issues to investigate in this category include: Is the amount of money owed to suppliers reasonable in relation to purchases? Is the business's payment policy such that it will enhance or detract from its credit rating? If available, are discounts being taken? What are the timing relationships between payments on accounts payable and collection on accounts receivable?

Short-term loans and overdrafts

Short-term loans and overdrafts owed to banks or other lenders are a second major source of financing for the business. Important questions in this class include: What is the amount of bank borrowing employed? Is this debt amount reasonable in relation to the equity financing of the business? When will principal and interest payments fall due? Will funds be available to meet these payments on time?

Accrued expenses and taxes payable

Accrued expenses and taxes payable represent obligations of the business as of the date of preparation of the statement of financial position (balance sheet). Accrued expenses represent such items as salaries payable, interest payable on bank loans and insurance premiums payable. Of primary concern in this area, particularly regarding taxes payable is the magnitude, timing and availability of funds for payment. Careful planning is required to ensure that these obligations are met on time.

Finally, it is important to recognise that, although the working capital accounts above are listed separately, they must be viewed in totality and from the point of view of their relationship to one another. What is the overall trend in net working capital? Is this a healthy trend? Which individual accounts are responsible for the trend? How does the business's working capital position relate to similar-sized businesses in the industry? What can be done to correct the trend, if necessary?

Of course, the questions posed are much easier to ask than to answer and there are few 'general' answers to the issues raised. The topics that follow provide suggestions, techniques and guidelines for successful management which, when tempered with the experience of the entrepreneur and the unique requirements of the particular industry, may be expected to enhance one's ability to effectively manage the financial resources of a business.

3.4.3 Long-term financial planning

As part of the preparation of a strategic plan, there is a need to forecast the future statement of the financial position (pro forma statement of financial position) or the statement of comprehensive income (pro forma statement of comprehensive income). These are usually prepared over annual periods of three to five years into the future. Of course, it is appreciated that this is only a strategic look into the future, which may be inaccurate. The reason for preparing pro forma statements is the need to control the future of the business by planning its course of expansion through the use of the financial tools explained in this section.

When preparing pro formas we must determine the rate of growth of the business that is desirable and reasonably attainable. The growth rate will then be applied in determining capital requirements to finance the stock, plant, equipment and the personnel that will be necessary to attain that growth in sales volume. The entrepreneur must anticipate capital needs early so as to make satisfactory arrangements for outside funds if internally generated funds from retained earnings are insufficient.

Important

Small business growth can be funded from retained profits or by borrowing. Usually, businesses that grow faster than the available capital base run into problems with cash flow, which fails to support higher levels of accounts receivable, inventory, fixed assets and operating expenses. Such businesses usually end up being liquidated, resulting in the business's assets being sold off to meet the demands of the creditors. The only way to avoid this is by planning ahead and controlling the rate of growth.

To develop effective long-term plans, you should take the following steps:

1. Determine your personal objectives and how they affect your willingness and ability to pursue financial goals for your business.

   This consideration, which is often overlooked, will help you determine whether or not your business goals fit your personal plans. Long-range planning enables you to be realistic about the future of your personal and business expectations.

2. Set goals and objectives for the business – growth rates, return on investment and direction – as the business expands and matures. Express these goals in specific numbers. For example, sales growth of 10% a year, increases in gross and net profit margins of 2–3% a year, a return on investment of not less than 9–10% a year. Use these long-range plans to develop forecasts of sales and profitability and compare actual results from operations to these forecasts.
3. Develop long-range plans that enable you to attain your goals and objectives. Focus on the strengths and weaknesses of your business and on internal and external factors that will affect the accomplishment of your goals. Develop strategies based upon careful analysis of all relevant factors (pricing strategies, market potential, competition, cost of borrowed and equity capital, as compared to using only profits for expansions, etc) to provide direction for the future of your business.
4. Focus on the financial, human and physical requirements. This is necessary to fulfil your plan by developing forecasts of sales, expenses and retained

earnings over the next three to five years. This will lead to business growth and add more shareholder value.

5. Study methods of operation, product mix, new market opportunities and other such factors. This will help you to identify ways to improve your business's productivity and profitability.

3.4.4 Forecasting

As part of financial planning, small businesses have to do forecasts, particularly on a short-term basis (one year to three years). This process, estimating future business performance based on the actual results from prior periods, enables the entrepreneur to modify the operation of the business on a timely basis. This allows the business to avoid losses or major financial problems should certain future results from operations not conform to reasonable expectations. Forecasts, or pro forma statements of comprehensive income and cash flow statements as they are usually called, also provide the most persuasive management tools when applying for loans or trying to attract investor money. As a business expands, there will inevitably be a need for more money than can be generated internally from profits.

3.4.5 Preparation of pro forma statements

The preparation of forecasts (pro forma statements) requires assembling a wide array of pertinent, verifiable facts affecting your business and its past performance. These include data from prior financial statements, particularly:

- previous sales levels and trends
- past gross percentages
- average past general, administrative and selling expenses necessary to generate your former sales volumes
- trends in the business's need to borrow (supplier, trade credit and bank credit) to support various levels of inventory and trends in accounts receivable required to achieve previous sales volumes.

Some of the business information needed to carry out a forecast is:

- plant capacity
- competition
- financial constraints
- personnel availability
- industry-wide factors, including:
    - overall state of the economy

- economic status of your industry within the economy
- population growth
- elasticity of demand for the product or service that your business provides

  (Demand is said to be 'elastic' if it decreases as prices increase, a demonstration that consumers can do without, or with less of, the goods or services. If demand for something is relatively steady as prices increase, it is said to be 'inelastic'.)
- availability of raw materials.

Once these factors are identified, they may be used in pro forma statements, which estimate the level of sales, expenses and profitability that seem possible in a future period of operations.

3.4.6 The pro forma statement of comprehensive income

In preparing the pro forma statement of comprehensive income, the estimate of total sales during a selected period is the most critical 'guesstimate'. To do this, you must employ business experience from past financial statements and/or get help from management and salespeople in developing this all-important number.

We may assume, for example, that a 15% increase in sales volume is a realistic and attainable goal. Multiply last year's net sales by 1.15 to get this year's estimate of total net sales. Next, break down this total, month by month, by looking at the historical monthly sales volume. From this, you can determine what percentage of total annual sales fell on average in each of those months over a minimum of the past three years.

Next, estimate the cost of goods sold by analysing operating data to determine on a monthly basis what percentage of sales has gone into cost of goods sold in the past. This percentage can then be adjusted for expected variations in costs, price trends and efficiency of operations.

Operating expenses (sales, general and administrative expenses, depreciation and interest), other expenses, other income and taxes can then be estimated through detailed analysis and adjustment of what they were in the past and what you expect them to be in the future.

Revenue (sales)

- List the departments within the business. For example, if your business is appliance sales and service, the departments would include new appliances, used appliances, parts, in-shop service and on-site service.

- In the 'estimate' columns, enter a reasonable projection of monthly sales for each department of the business. Include cash and on-account sales. In the 'actual' columns, enter the actual sales for the month as they become available.
- Exclude from the revenue section any revenue not strictly related to the business.

Cost of sales

- Give the costs by department of the business, as above.
- In the 'estimate' columns, enter the cost of sales estimated for each month for each department. For product inventory, calculate the cost of the goods sold for each department (beginning with inventory plus purchases and transportation costs during the month, minus the inventory). Enter 'actual' costs each month as they accrue.

Gross profit

Subtract the total cost of sales from the total revenue.

Expenses

Include the following items to calculate total expenses:

- Salary expenses: basic pay plus overtime.
- Payroll expenses: include paid vacations, sick leave, health insurance, unemployment insurance, social security taxes.
- Outside services: include costs of subcontractors, overflow work contracted out, special or one-off services.
- Supplies: services and items purchased for use in the business, not for resale.
- Repairs and maintenance: regular maintenance and repair, including periodic large expenditures, such as painting or decorating.
- Advertising: include desired sales volume, classified directory listing expense, etc.
- Car, delivery and travel: include charges if a personal car is used in the business. Include parking, tolls, mileage on buying trips, repairs, etc.
- Accounting and legal: outside professional services.
- Rent: list only real estate used in the business.
- Telephone.
- Utilities: water, heat, light, etc.
- Insurance: fire or liability on property or products, workers' compensation.
- Taxes: inventory, sales, excise, real estate, others.
- Interest paid.

- Depreciation: amortisation of capital assets.
- Other expenses (specify each): tools, leased equipment, etc.
- Miscellaneous (unspecified): small expenditures without separate accounts.

Net profit

To find net profit, subtract total expenses from gross profit.

Example

How to develop pro forma statements

Robtcher Gift is the owner of a successful sushi restaurant located in Lilongwe. He is currently running one restaurant, but has the opportunity to open three more branches in various new shopping malls. The current statement of financial position and comprehensive statement of income are shown below. The restaurant industry is growing at a rate of 15% per annum. Interest at the bank is currently 18% on borrowed funds. Should Robtcher proceed with the opening of three restaurants at the same time? Robtcher Restaurant's financial statements are as follows:

Table 3.4: Robtcher Restaurant statement of financial position

Robtcher Gift Sushi Restaurant statement of financial position for the year ended 31 December 2009	
NON-CURRENT ASSETS	**1 200 000**
Net land and buildings	700 000
Machinery and equipment	500 000
CURRENT ASSETS	**1 401 000**
Cash	200 900
Stock	1 200 100
TOTAL ASSETS	2 601 000
SHAREHOLDER'S FUNDS	**1 000 000**
Common shares	500 000
Distributable reserves	500 000
NON-CURRENT LIABILITIES	
Long-term loans (bank)	1 200 000
CURRENT LIABILITIES	**401 000**
Short-term loan (bank)	300 000
Creditors	101 000
LIABILITIES AND S/H FUNDS	2 601 000

Robtcher Gift Sushi Restaurant statement of comprehensive income for the year ended 31 December 2009	
Net sales	1 350 450
Less: cost of sales	810 270
Gross profit	540 180
Less: operating costs	389 500
Net profit before interest and tax	**150 680**
Less: interest paid	58 500
Net profit before tax	92 180
Less: tax paid	27 654
Net profit after tax	**64 526**
Less: dividends paid	32 263
Retained earnings	32 263

Source: Nieuwenhuizen (2011)

The first step is to determine the new statement of comprehensive income, by assuming a growth rate of 15% per restaurant. Secondly, we will assume that each new restaurant will have the same profitability as the original restaurant.

Column A in Table 3.5 is the current statement of comprehensive income for 2009. In Column B we have illustrated the conversion of all line items as a percentage of sales. As an example, cost of sales is R810 270/ R1 350 450 × 100% = 60%. Please note that sales represent 100%.

Table 3.5: Pro forma statement of comprehensive income

	A 2009	B % of sales	C 15% growth	D Three restaurants
Net sales	1 350 450	100%	1 553 018	4 659 053
Less: cost of sales	810 270	60%	931 811	2 795 432
Gross profit	540 180	40%	621 207	1 863 621
Less: operating costs	389 500	29%	447 925	1 343 775
Net profit before interest and tax	150 680	11%	173 282	519 846
Less: interest paid	58 500	4%	67 275	201 825

	A 2009	B % of sales	C 15% growth	D Three restaurants
Net profit before tax	92 180	7%	106 007	318 021
Less: tax paid	27 654	2%	31 802	95 406
Net profit after tax	64 526	5%	74 205	222 615
Less: dividends paid	32 263		37 102	111 307
Retained earnings	32 263		37 102	111 307

Source: Nieuwenhuizen (2011)

From the above pro forma statement of comprehensive income, it is evident that if Robtcher wants to expand immediately into four stores by opening the three new restaurants at the same time, he will need to raise at least R1 343 775 to cover operating expenses. Now the question is, how is he going to raise the money? Currently, in the statement of financial position, the business has built up reserves of R500 000 and an asset base of about R2 million.

If we look at an extract of the previous statement of financial position, as shown below, we can conclude that the four restaurants will need about R4 million investment in current assets. This puts more pressure on the need for funds. In addition to this, each restaurant will need an investment in assets, which means that the statement of financial position figures could increase to three times what they are at present, putting even more pressure on Robtcher for funding. The figures in Table 3.6 are only applicable if we keep all of the restaurants much the same size.

Table 3.6: Extract from statement of financial position

	Assets for one restaurant	Assets needed for three more restaurants
NON-CURRENT ASSETS	1 200 000	3 600 000
Net land and buildings	700 000	2 100 000
Machinery and equipment	500 000	1 500 000
CURRENT ASSETS	1 401 000	4 203 000
Cash	200 900	602 700
Stock	1 200 100	3 600 300
TOTAL ASSETS	2 601 000	7 803 000

Source: Nieuwenhuizen (2011)

Growth is good for a business, but a detailed analysis of cash flow implications brought about by the growth is paramount.

The pro forma statement of comprehensive income, prepared on a monthly basis and culminating in an annual projection for the next business fiscal year, should be revised at least quarterly. It must reflect the actual performance achieved in the immediately preceding three months to ensure its continuing usefulness as one of the two most valuable planning tools available to management.

Should the pro forma reveal that the business will probably not generate a profit from operations, plans must be developed immediately to identify what to do to at least break even – increase volume, decrease expenses or put more owner capital in to pay some debts and reduce interest expenses.

3.5 Raising capital

One of the biggest challenges facing the small business owner is raising capital. There are a number of ways of raising capital available to medium and large corporations. However, access to these sources is fraught with technical restrictions, from requests for security or collateral to capping on the minimum loan amount, which can make the funding too expensive for the small business owner.

Capital is needed to support the selling process, in terms of buying inventory or marketing the products or services, for paying salaries and wages, for purchasing different types of assets and for paying business taxes, etc. As long as the business is in operation, it will constantly need financing in the short-, medium- and long term.

3.5.1 Causes of additional capital needs

There are many factors that can create a need for additional capital. Some of the more common ones are as follows:

- **Sales growth that leads in many instances to more investments in stock.** There is no point in carrying out a huge marketing drive without acquiring more stock. The cost of a stock run-out can be quite high, not only from lost sales, but also from lost customer trust.
- **An increased volume of accounts receivable.** Increasing turnover, especially where sales are on a credit basis, puts a lot of pressure on the business's cash flow. When customers buy goods on credit, the small business 'finances' them, and the business's cash is tied up in such

transactions. It also puts a lot of pressure on the business owner to put debt collection systems in place, otherwise bad debts will increase, leading to further cash flow problems.

- **Entrepreneurs need cash for business growth.** While growing your business is the ultimate goal for most entrepreneurs, this growth has to be managed very closely. In fact, most small business consultants advise entrepreneurs to curtail high-growth business. High growth always leads to an increased need to carry larger cash balances in order to meet the business's recurring monthly, and sometimes weekly, obligations to employees, trade creditors and others.
- **Efficiency drives.** By utilising new technologies, SMEs can reduce their cost of providing goods and services, that is, they can be more efficient. This, however, comes at a very high cost. New technologies are quite expensive, and if the new equipment does not deliver the desired results, this can exacerbate the problem.
- **Quantity discounts.** Sometimes entrepreneurs are tempted to take advantage of cheaper product cost when buying in bulk and they buy large, unplanned quantities of inventory. This can assist the entrepreneur in realising a larger profit margin through discount received, but this invariably leads to an increased need for capital as more capital is frozen in inventories. Obviously, there is a danger that, should the business fail to sell the huge quantities of stock purchased, the expected returns will be lost.
- **Seasonal factors.** Some businesses are seasonal in nature. For example, ice cream sales are much higher in the summer months than in winter. Businesses tend to build high stock levels in preparation for the high or peak season. This invariably leads to a much higher need for capital than normal. To make matters worse, when the sales are done on credit, it might take another 30 to 60 days to collect from debtors.
- **Changes in interest rates after a loan is granted.** SMEs are usually at a disadvantage when it comes to negotiating interest charges. In many instances, an increase in interest rates hits SMEs more severely due to higher loan repayment rates. For example, a repo rates increase by the Reserve Bank can adversely affect these customers' disposable income and their ability to meet all of their financial obligations.
- **Local or national economic conditions.** Economic downturns can cause sales and profits to decline temporarily, which might lead to a cash flow or capital deficiency. A business might be forced to cut down on staff or other essential support services in a bid to reduce overheads. In addition, such economic conditions also make it difficult for customers to settle their bills

in the normal manner, which might lead to an increase in bad debts or to a slow collection of receivables. An increase in the petrol price can also adversely affect customers' disposable income and their ability to meet all of their financial obligations.

- **Low retained profits.** Business growth requires investment in capital. This can be done via new capital injection by the entrepreneur or by retaining profits from previous years, instead of always paying them out as a dividend to the owner or owners. However, this could be a compromising position as shareholders always want to receive dividends on the shares they own in the business. Not retaining profits puts a lot of pressure on the business when capital is needed for expansion or investment.

3.5.2 Sources of capital

In order to secure the capital needed, entrepreneurs must understand the various sources of money that could be available to them, such as the following:

- internally generated capital (retained income)
- trade creditors or suppliers of inventory
- borrowed funds from banks and other lenders
- sale of an ownership interest in the business to other equity investors
- disposal of non-current assets.

Each of these capital sources has unique characteristics. These must be fully understood by the entrepreneur so that they will know what sources are available and which source is best suited to the needs of their business.

Internally generated capital

This is the most critical source of capital. It is the main source of capital, as it arises from the operations of the business. Once profits have been generated, the entrepreneur should endeavour to retain some of the profits in the business, rather than always paying it out in the form of dividends. For a small business, the retained income belongs to the owners, while big businesses can declare a certain percentage of the retained income as dividends, which are distributed according to the number of shares owned by the shareholders.

Trade creditors or suppliers of inventory

In many instances, the entrepreneur can negotiate to buy stock on credit terms, usually 30 days interest-free. This shows very profitable management of capital. From a financial management perspective, we can also demonstrate that the opportunity cost of not taking advantage of this can lead to slow growth in the business. In these types of transactions, the business uses its reputation with suppliers to gain access to bulk stock. See the example below:

Example

Joyous Restaurant has the option of buying R50 000 worth of stock on credit for 30 days interest-free. The bank currently offers the restaurant interest of 15% on positive balances and charges them the same rate on negative balances. Calculate the advantage or disadvantage of using trade credit.

If Joyous Restaurant prefers to buy on credit for 30 days interest-free, there is an opportunity cost equivalent to the cost of savings at 15% interest. If Joyous is able to cash off all their R50 000 worth of stock every month, they could gain (R50 000 x 15% x 30/365) = R616.44 savings from interest per month. This looks like a small amount of money, but it could have increased net profits by that much each month. At the end of the year, it is equivalent to (R616.44 x12) = R7 397.28!

Although a business does not buy reputation but earns it through proper payment, when you look at Joyous Restaurant, you will see that it used the supplier's stock without paying a cent, raising the money which is payable at the end of the month. At the same time it generated profit by selling, and saved on interest charges.

Borrowed funds from banks and other lenders

When the business decides to use borrowed funds, the decision should be based on affordability. Affordability implies the business's ability to repay both the interest and capital portions of the loan. It should be remembered that repayments are made from profits generated by the business. It must be noted that a small business may not be able to meet the criteria set by formal financial institutions, as the lending criteria include collateral requirements, legal title, records and forms, and other lender requirements that potential borrowers might not be able to provide. Where a business makes an operating loss, it implies that the business is unable to meet its financial obligations to repay interest to lenders. The following example will illustrate the importance of this concept.

Example

Chance (Pty) Ltd has applied for a loan from Old Bank for R500 000, to acquire equipment that it needs for manufacturing various steel products for the construction industry. The interest payable on the loan is charged at 1.5% per month. However, the capital is payable in full on maturity of the loan after 5 years. Chance (Pty) Ltd makes an annual turnover of R2 million and has a gross profit margin of 35%, while operating costs (excluding interest) are 25% of turnover.

Comments:

The interest payable on this loan is R500 000 x 1.5% = R7 500 per month or R90 000 per year.

Gross profit is 35% x R2 000 000	= R700 000
Operating costs are 25% x R2 000 000	= R500 000
Operating profits = R700 000 – R500 000	= R200 000

Remember, interest has to be paid out of the R200 000. This looks fine because the annual interest charge is R90 000. However, if you look at it closely, you will realise that the interest cover ratio is calculated by dividing profit before interest and tax by the interest payable. For Chance (Pty) Ltd, the interest cover ratio is R200 000 ÷ R90 000 = 2.22. This means that Chance (Pty) Ltd is currently making a profit of R2.22 for every R1 of interest that it is paying. This looks very bad, because a slight drop in turnover could lead to financial difficulties for Chance (Pty) Ltd. It is usually recommended that the interest cover ratio should be at least R7 profit for every R1 of interest paid. It must be noted that many more firms would like to take out loans but are constrained by an inability to find personal guarantors and by other bureaucratic procedures.

Sale of an ownership interest in the business to other equity investors

When faced with a decision to raise capital for a variety of reasons, usually the last thing that an entrepreneur has in mind is to share ownership. This is a very common sentiment in SMEs due to the nature surrounding the formation of the business. There is a lot of passion and sweat involved, as well as protection of the idea of the business. In the case where an entrepreneur does consider sharing ownership, preference is usually given to a friend or someone they know well. This severely restricts the opportunities to raise the desired capital.

The best way is always to try to have the business registered formally as a limited liability company. In that way legal structures can be put in place to protect the investment made by any of the parties investing in the business. The common way of investing is via buying of shares in the business. The price of the shares can be calculated and negotiated with the new buyer.

A consulting company will provide assistance in determining a realistic selling price for these shares. However, this type of share trading is different from the shares traded on the floors of the security exchanges.

Disposal of non-current assets (asset management)

Many businesses have non-productive assets that can be liquidated (sold or collected) to provide capital for short-term needs. A vigorous campaign of collecting outstanding debts, with particular emphasis on amounts that have been owed for a long time, can often produce significant amounts of capital. Similarly, inventories can be analysed and those goods with relatively slow sales activity or with little hope for future fast movement can be liquidated at a discounted percentage, for example, at 50% discount. The liquidation can occur through sales to customers or through sales to wholesale outlets.

On a long-term basis, the business can minimise its external capital needs by establishing policies and procedures that will reduce the possibility of cash shortages caused by ineffective asset management. These policies could include the establishment of more rigorous credit standards, a systematic review of outstanding receivables, a periodic analysis of slow-moving inventories and the establishment of profitability criteria so that fixed asset investments are more closely controlled.

3.5.3 Summary

This section was developed to inform you about the various sources of capital that are available to the entrepreneur. The need for additional capital occurs frequently in many small businesses. The ability of entrepreneurs to anticipate the need and to know the various money sources available to them will help them secure needed capital on favourable terms.

Those businesses that are alert to opportunities for internal capital generation will often find that this effort not only minimises the need for external capital, but also opens the doors of the outside money market to them.

This section has explored both internal and external capital sources, showing how you can minimise your need for external financing through proper asset management and retention of earnings.

You have seen how the availability of trade credit can be utilised intelligently in order to maintain favourable supplier relations, while taking full advantage of the credit that is available from this vital and convenient source. Various types of loan arrangements were also explored, considering both short- and long-term needs, as well as typical requirements for security through pledging of specific assets or the entrepreneur's personal guarantees.

Finally, the equity capital market was introduced to help you understand what the equity investor expects in return for a commitment of capital and the effect that the equity investor's interest can have on the business.

3.6 Credit and collection methods

'Plastic' has become a way of life. Those wallet-size credit cards are accepted all over the world in millions of stores for many millions of products and services. Depending on the nature of the business, in order to be competitive, you must in turn offer credit to your customers. After all, most of your business's purchases are probably on credit.

3.6.1 Management of receivables

As the operator of a small business, you must extend credit to customers on competitive terms so that sales will not be lost. At the same time, you must avoid long overdue accounts so that your capital will not be tied up and there will be less chance of accounts becoming uncollectable. If you manage your accounts receivable as suggested in this section, you will realise the marketing advantages of credit extensions and avoid the common problems noted above.

Many potential credit problems can be eliminated before they happen, through investigation and prudent judgement when granting credit to customers. The need for sound judgement is particularly critical, since credit extension policies should be neither too liberal nor too restrictive. Overly liberal policies invite excessive receivables and uncollectable accounts, while policies which are too restrictive cause lost sales.

Before you decide, get the facts. Thorough investigation of credit requests protects you from the fraudulent applicant who has no intention of paying, as well as the applicant who is extremely slow in paying.

3.6.2 Credit applications

The basic source of information for decisions on credit extensions is the credit application. There are three major factors to consider in evaluating a credit applicant. The first is the applicant's ability to pay, based upon income and other financial obligations; for example, if the applicant has already taken out other credits. The second is willingness to pay, which can be determined from the applicant's credit history. The third factor is the potential profitability of the account.

You stand to lose the cost of the product or service sold to the customer if you cannot collect an account. If your cost is relatively high compared to the selling price, then you have to be particularly careful in assessing credit risks.

Your evaluation of any credit application will depend upon a number of factors. In the case of an individual applicant, you will want to consider the following:

- the residential status
- employment history
- employment status
- current position
- current income
- time in the job
- job security (being permanently employed)
- monthly obligations (rent, loan payments, food, utilities, etc)
- bank balances (6 months' bank statements)
- personal assets (house, cars, stocks, bonds, etc)
- credit standing (blacklisted)
- amount of credit desired.

Information on credit applications must be verified to ensure that it is correct, current and complete. A good place to begin the verification is the place of employment to verify that the applicant is, in fact, employed and that income and time in the job have been reported accurately.

Bank references should also be verified. While laws restrict the amount of information that banks can disclose, checking on this information can protect you from obvious fraud and may give you some indication of the applicant's ability to pay. Most banks will confirm the existence of an account and disclose a broad idea of the average balance and the year in which the account was opened. The bank may also indicate whether or not the account has been satisfactorily active or passive in terms of income.

An important source of information for retail credit is the local credit bureau, which generally provides information on credit applicants to businesses that are bureau members. Annual membership fees usually depend upon the size of the business. Besides the membership fee, there is a nominal charge by the bureau for each inquiry on a credit applicant. Your local credit bureau will supply you with details about the services they render and the associated costs.

In situations where the time or cost of a comprehensive credit check is prohibitive, professional credit managers have often found that a quick evaluation can be made based upon the applicant's stability. Stability is determined by the length of continuous employment and residence. This assumes that the person who has been employed for several years in the same job will most likely continue to be employed and, therefore, will be able to pay. Similarly, continuous residence indicates a desire to maintain a standing in the community.

3.6.3 Summary

There are no hard and fast rules that can tell you who is a good credit risk and who is not. There are cases where the poorest people pay their bills promptly, while the wealthy ignore them. As an entrepreneur, you must combine facts about the applicant with common sense to determine those risks that appear reasonable.

3.7 Cash flow planning

The cash flow forecast runs hand in hand with the budgeted statement of comprehensive income. It also compares very closely to the budgeted statement of comprehensive income, which takes account of transactions at the time that the expense accrues to the organisation and the income is earned. The cash flow forecast deals with the transactions at the time of payment and receipt.

For example, if goods are sold on credit, it may be a month or two before payment is received. Equally, when you purchase goods you may be able to take 30 days to pay for them.

Although these items will be recorded in the statement of comprehensive income for the month that the goods arrive (or are dispatched), there will be a delay before the transactions have any effect on the bank account. In the same way, some overhead expenses will be incurred on an irregular basis instead of evenly over the months.

Example

Insurance is normally paid for 12 months in advance, while the benefit of having the policy accrues evenly throughout the year. These differences in timing must be incorporated into the statement of cash flow.

The cash flow forecast must also take account of capital expenditure for equipment or plant for use in the organisation.

Cash is the lifeblood of an organisation: it makes the wheels go round, but for the reasons stated above, cash does not necessarily flow at the same time as sales. One of the main reasons for organisational failures is that businesses have insufficient cash available to meet liabilities as they fall due. Having prepared a budgeted statement of comprehensive income, it is essential to review the cash situation of the organisation to ensure that the finance will be there to make the whole thing possible.

Definition

If cash is the lifeblood of the organisation, then sales are the heart that pumps blood back to the beginning of the system. The ***statement of cash flows*** reports the changes in cash over a period of time and, most importantly, explains those changes. The purpose of the statement of cash flows is to provide information about a company's cash inflows and outflows.

The total funds available to the business are used for the purchase of materials and payment of labour costs. Some funds are also used to purchase machinery, which, in turn, earns its place in the business by helping to make the product. These elements all combine to make the product and, through sales, this produces the cash to make the cycle flow again.

Example

You sell goods on credit in January, but the customer takes 60 days' credit before making payment. The money from the sale is therefore not received until March. So, although you have made the sale and earned your income, how do you pay the wages at the end of January and February?

This example illustrates why the banks place so much emphasis on cash flow and often insist that their customers produce statements of cash flow for them; otherwise they know that they will be expected to provide the necessary bridging finance. However, you must keep in mind that you may also sell goods in February which are paid for in April, and goods sold in March will be paid for in May, and so on. So, in fact, it is not temporary finance that is needed, but long-term finance. Therefore, in preparing the statement of cash flow, we must consider the timing of payments and receipts.

As mentioned above, the banks consider the preparation of a statement of cash flow of prime importance – and rightly so. The first thing to decide is the period of the forecast. This might be three months, six months or a year. Periods longer than a year are likely to be unreliable: *remember, a year is a long time in a business*. You should also decide into how many periods you are going to break the forecast.

On a short forecast covering, say, three months, you may decide that you should use weekly periods. A short forecast like this can be prepared with a lot of detail and a reasonable degree of accuracy. A forecast looking ahead six or twelve months, subdivided into monthly periods, is more normal and should give a good general indication of the cash flow trend of the business.

Longer forecasts are possible. Sometimes, it is decided to produce a five-year plan. In this case, the periods chosen will probably be calendar quarters and although they can be used to show general trends, they are unlikely to prove very accurate in the end.

3.8 Summary

In this chapter, you were introduced to the financial function of the SME. We explained important financial concepts, such as financial management, financial planning and capital.

We discussed the objectives of financial management and saw that, in addition to the primary objective of financial management, there are also secondary objectives. We also briefly discussed the tasks of financial management. Important aspects of every task were emphasised. Take note of these aspects and ensure that you use them in your business! If you do not have the expertise to deal with all the financial requirements of your business, enlist the help of experts. Whatever you do, do not neglect the financial component of your business.

Questions for self-evaluation

1. Case study – cash flow planning

Madiba (Pty) Ltd has estimated sales and purchase requirements for the last half of the year. Past experience indicates that it sells 20% of its monthly sales on a cash basis, 50% of the debtors pay after one month of the sale and the balance in the second month following the sale.

Madiba prefers to buy half of its purchases for cash and the other half on 30 days' credit. Labour expense for each month is expected to equal 5% of that month's sales, with cash payment being made in the month in which the expense is incurred. Depreciation expense is R5 000 per month. Miscellaneous cash expenses are R4 000 per month and are paid in the month incurred. General and administrative expenses of R50 000 are recognised and paid monthly. A R60 000 truck is to be purchased in August and is to be depreciated on a straight-line basis over 10 years with no expected salvage value. The company also plans to pay a R9 000 cash dividend to shareholders in July.

The company feels that a minimum cash balance of R30 000 should be maintained. Any borrowing will cost 12% annually, with interest payable in the month following the month in which the funds were borrowed. Cash on hand (June 30) is R30 000. Actual sales and purchases for May and June and forecasts for July–September are shown in Table 3.7.

Table 3.7: Sales and purchases for May and June and forecasts for July–September

Month	Sales	Purchases
May	100 000	60 000
June	100 000	60 000
July	120 000	50 000
August	150 000	40 000
September	110 000	30 000

Required:

Prepare a cash budget for the months of July and August using the template in Table 3.8.

Table 3.8: Cash budget for Madiba Enterprises for July and August

Cash budget for Madiba Enterprises (Pty) Ltd for the months of July and August				
	May	**June**	**July**	**August**
Sales				
Purchases				
Cash receipts:				
Cash sale (month of sale) (20%)				
Debtors payments (1 month later – 50%)				
Debtors payments (2 months later – 50%)				
Total receipts				
Cash disbursements:				
Payments for purchases				
From 1 month earlier				
From current month				
Miscellaneous cash expenses				
Labour expense (5% of sales)				
General and administrative				
Truck purchase				
Cash dividends				

Cash budget for Madiba Enterprises (Pty) Ltd for the months of July and August				
	May	**June**	**July**	**August**
Total disbursements				
Net change in cash				
Plus: beginning cash balance				
Less: interest (1% on previous borrowings)				
Ending cash (no borrowing)				
Target cash balance				
Financing needed to reach target				
Ending cash balance				

2. Case study – financial ratio analysis

Paul Smith is the owner-manager of Trailer (Pty) Ltd, a business that manufactures trailers for the general consumer, as well as for transporting farm produce and livestock. The business has identified a need for trailers that are specifically designed for transporting horses and has started to develop this market as well. There is a countrywide demand for trailers used to transport horses.

Trailer (Pty) Ltd was established 37 years ago. It started as a very small business and gradually grew into a strong company. The business is located in Rosslyn, an industrial area north of Pretoria. More than 85% of the business's sales are in Gauteng and Limpopo provinces.

The business sells on credit directly to the final consumer, as well as to distributors in large towns in the rural areas. Credit is offered in the form of an open account, and the account holders are given a period of 30 days to pay.

The business's sales and net income showed consistent growth from its establishment up to about three years ago. However, by the end of 2013, the demand for trailers started to decline – competition increased in the market and weather conditions, such as droughts and hailstorms, also affected the company's sales.

In an effort to increase sales, Paul decided to market the business's products aggressively. He cut the prices of products to stimulate sales. He also decided to revise his customers' credit terms. Among other things, he introduced more favourable credit periods. During 2014, the business had a 30% increase in debtors. During the first half of 2014, sales started to increase again and grew consistently for the rest of the year.

Paul was satisfied with the improvement, and believed that if these business conditions could be maintained, the business's cash flow position would also improve. He started paying his creditors only after receiving a second statement from them, even though he realised that this was not an ideal situation. He thought that this was a short-term arrangement and that he would pay regularly and on time again, once he paid off all the debts that had fallen into arrears. In the past two months, the business has often exceeded the limit of its bank overdraft facility. (In the past this very seldom happened.)

As a result of the increase in sales during the past year, Paul has decided to extend his factory. He would like to increase its capacity so that it will be able to manufacture trailers for horses. The capital needed for this extension amounts to R500 000. Paul decides to apply for a short-term loan at the bank. He plans to use the income from sales to pay the interest on this loan of R500 000.

Additional information:

- **Management of the business** – Paul has owned the business for 37 years. His record at the bank is good. He has always met his obligations towards the bank and has paid as agreed. Trailer (Pty) Ltd has been a client of the bank for the past 20 years.
- **Credit bureau** – Trailer (Pty) Ltd has a clean credit record. There have been no judgments against the business or its owner.
- **Auditors** – Steyn & Steyn have been the business's auditors since 1983. The financial statements for the financial year ending on 31 December 2014 have been audited. An unqualified report was issued.
- **Sales representatives** – Trailer (Pty) Ltd employs two sales representatives. They are Vusi Themba (Gauteng) and Charles Paterson (Limpopo).
- **Revision of credit facilities** – Trailer (Pty) Ltd analyses and assesses the financial position of their debtors every year.

Trailer (Pty) Ltd's financial information is given in tables 3.9, 3.10 and 3.11.

Table 3.9: Trailer (Pty) Ltd statement of comprehensive income

Trailer (Pty) Ltd statement of comprehensive income for the year ended 31 December 2014	
Net sales	14 679 872
Less: cost of sales	12 498 193
Gross profit	2 181 679
Less: operating costs	1 848 426
Net profit before interest and tax	333 253
Less: interest paid	108 898
Net profit before tax	224 355
Less: tax paid	52 271
Net profit after tax	172 084
Less: dividends paid	14 157
Retained earnings	157 927

Table 3.10: Trailer (Pty) Ltd statement of financial position

Trailer (Pty) Ltd statement of financial position for the year ended 31 December 2014	
NON-CURRENT ASSETS	1 213 482
Land, buildings, machinery and equipment	1 715 513
Less: depreciation	502 031
CURRENT ASSETS	5 994 095
Cash	292 934
Debtors	2 201 765
Stock	3 499 396
TOTAL ASSETS	7 207 577
SHAREHOLDERS' FUNDS	2 897 754
Common shares	1 745 175
Distributable reserves	1 152 579
NON-CURRENT LIABILITIES	
Long-term loans (bank)	892 660

CURRENT LIABILITIES	3 417 163
Short-term loan (bank)	1 367 428
Creditors	1 499 889
Liabilities in arrears	549 846
LIABILITIES AND S/H FUNDS	7 207 577

Table 3.11: Financial ratios

Financial ratios	2013	2014	Norm	Formulae
Current ratio	3.07	2.68	2	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$
Acid-test ratio	1.66	1.08	1	$\frac{\text{Current Assets – Stock}}{\text{Current Liabilities}}$
Turnover rate of stock	8.6×	7.1×	9×	$\frac{\text{Cost of Sales}}{\text{Stock}}$
Debtors' payment period	36 days	36 days	45 days	$\frac{\text{365 x Debtors}}{\text{Sales}}$
Creditors' payment period	20 days	24 days	30 days	$\frac{\text{365 x Creditors}}{\text{Cost of Sales}}$
Debt ratio	40%	46%	50%	$\frac{\text{Non-Current Liabilities}}{\text{Total Assets}}$
Debt-equity ratio	68%	86%	60%	$\frac{\text{Total Liabilities}}{\text{Total Equity}}$
Interest coverage	15.9×	7.97×	5×	$\frac{\text{Profit before Interest and Tax}}{\text{Interest Expense}}$
Net profit margin	5.5%	3.4%	12%	$\frac{\text{Profit after Tax}}{\text{Sales}}$
Return on assets	35%	20%	25%	$\frac{\text{Profit after Tax}}{\text{Total Assets}}$
Return on equity	28%	17%	20%	$\frac{\text{Profit after Tax}}{\text{Total Equity}}$

Required:

1. As the bank (credit) manager, list the different types of information you would need as part of the loan approval process.
2. Calculate the financial ratios for 2014 (similar to the ones in the table above).
3. Compare these ratios with the previous years and the industry norm and make a summary of the financial position of Trailer (Pty) Ltd.
4. Given the answers from questions 1–3 above, what decisions would you make regarding Trailer (Pty) Ltd's application for a loan?

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The marketing function

CHAPTER 4

Learning outcomes

After studying this chapter, you should be able to:

- define and explain what marketing is
- explain the concept of exchange
- describe the marketing activities
- discuss the four main marketing orientations
- explain the marketing process
- discuss the marketing function in a business.

4.1 Introduction

The past few years have seen marketing becoming more and more important as businesses battle to survive and competition becomes more fierce. This is true not only of large companies but also of smaller businesses. Marketing is key to all businesses and it is imperative that it is managed well in the business. Marketing is the function that generates income for the business in order for it to meet its obligations and to provide funds for growth and expansion. It is therefore essential for the entrepreneur to give appropriate attention to this function, and not only to finance and production, as is often the case. The aim of this chapter is to explain what marketing is and how it must be applied for the benefit of the business.

It is important for the entrepreneur to have a good understanding of what marketing is and its importance in the business. Without marketing, the business cannot survive, and it is therefore important to be aware of the tasks of the marketing function. It is vital for all businesses, but even more so in the case of smaller businesses, to assess the wants and needs of current and future customers.

A number of actions can be taken to facilitate this, including identifying new ideas, patenting these ideas and developing them, setting prices, selecting distribution channels, finding the best way to market the product and deciding which promotional media to use.

Important

Entrepreneurs should be aware of the fact that marketing is part and parcel of our everyday lives and that an understanding of what marketing is and how it influences their customers' lives is required if the needs of the market are to be served. By developing a better understanding of marketing, entrepreneurs can better focus on their customers, be able to identify their needs and wants, and establish the best way of communicating with them.

The ultimate goal of all marketing activity is to facilitate mutually satisfying exchanges between parties. The activities of marketing include the conception, pricing, promotion and distribution of ideas, products and services.

The role of marketing and the character of marketing activities within a business are strongly influenced by its philosophy and orientation. Not many entrepreneurs understand the philosophy of marketing, as they tend to assume that they know what the market wants. This has led to the downfall of many businesses, and will continue to do so. It is essential that the entrepreneur understands that their business must be focused on satisfying the customers' needs, and that all in the business must work together to achieve this.

A business can be a production-oriented business, which focuses on the internal capabilities of the business rather than on the desires and needs of the marketplace.

It can also be sales-oriented, which means the business is based on the beliefs that people will buy more products if aggressive sales techniques are used, and that high sales volumes produce high profits. On the other hand, a marketing-oriented business focuses on satisfying customer wants and needs while meeting business objectives. It is this last orientation that the entrepreneur should strive for.

For a business to follow a marketing-oriented approach, it must adhere to the marketing concept, a philosophy according to which the marketing task in the business is performed. The essence of the marketing concept lies in four principles, namely:

- a consumer orientation
- the long-term maximisation of profit
- an integrated approach from all in the business to satisfy customer needs
- social responsibility.

In order for the marketing concept to be fully implemented in the business, the entrepreneur and their staff must embrace and endorse the concept and encourage its use in every activity of the business.

In this chapter, we will discuss what marketing is, the gaps that exist between manufacturing and consumption, the activities needed to fill the gaps, the marketing process, the marketing environment, the marketing mix and the marketing plan. These items, though not comprehensive, cover the main aspects of marketing in a business.

4.2 The nature of marketing

Various definitions of marketing exist, but most of them mean essentially the same thing. The term 'marketing' is a broad concept that means many things to many people. Some people think that it means the same as personal selling; others think that marketing is the same as advertising. Still others believe that marketing has something to do with making products available in stores, arranging displays and maintaining inventories of products for future sales. In reality, marketing includes all of these activities and more.

Definition

The American Marketing Association's definition of ***marketing*** is widely accepted in the marketplace: 'Marketing is the process of planning and executing the conception, pricing, marketing communication and distribution of ideas, products and services to create exchanges that satisfy individual and business goals.'

Source: American Marketing Association (2008)

If the marketer understands the basic activities of marketing, which include understanding consumer needs, developing products that provide superior value, pricing that product correctly and distributing and promoting the product effectively, then, ultimately, the chance of product success is much higher.

Quote

Marketing is thus 'the activity, set of institutions, and process for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large'.

Source: American Marketing Association (2008)

4.2.1 Exchange and marketing

Any entrepreneur who starts a business offering a service or product has to engage in some form of exchange between the business and the customer, that is, between the place of production and the place of consumption. It is this exchange that is essential for the business to prosper and survive over the long term. If customers are prepared to pay a certain amount for, say, a new generation cellphone they have to part with their money (cash, cheque, credit card or EFT) to obtain this product. In order for any kind of exchange to take place, five conditions are required:

1. at least two parties must be involved
2. each party must have something that the other party values
3. each party must be able to communicate with the other party and deliver the goods or services sought by the other trading party
4. each party must be free to accept or reject the other's offer
5. each party must want to deal with the other party.

A market exists if these conditions prevail. However, exchange will not necessarily take place even if all these conditions exist. They are, however, necessary for exchange to be *possible*. For example, an advertisement may be placed online on OLX or Junk Mail, offering a range of gym equipment for sale. The seller may be contacted by a number of potentially interested buyers who may come and look at the equipment and may even make an offer. However, unless you reach an agreement with a buyer and actually sell the equipment, an exchange will not take place.

When exchange takes place, certain gaps are created between production and consumption. These gaps are discussed in the next section.

4.2.2 Gaps between production and consumption

The place where a product is produced is not necessarily the place where it is consumed, and this causes gaps in the marketing process. Identifying these gaps can be described as core marketing aspects.

Figure 4.1 shows that the core marketing aspects are linked, with each aspect building on the one before it.

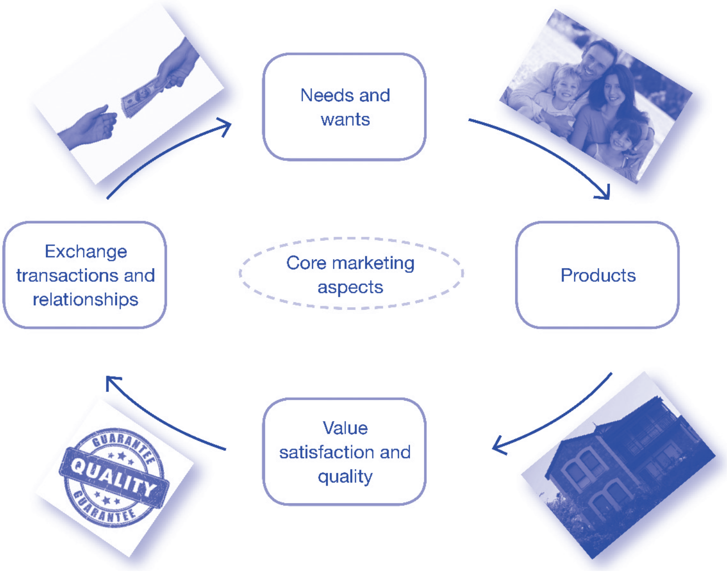

Figure 4.1: Core marketing aspects

Source: Cant et al (2013: 5)

A number of gaps exist between these aspects. For example, a consumer who wants to buy a hunting rifle will have choices, such as the calibre, brand and design of the rifle. The gaps that can be identified here lie in the transport of the product, availability of the brand in the country, calibre ranges and design of the barrel and stock of the rifle. When these gaps are filled, an exchange can take place.

The successful marketing of a suitable market offering is possible only if all the gaps in the process have been effectively bridged. In many instances, entrepreneurs enter the market specifically because gaps exist in the market. There are primarily five gaps that can be distinguished. These are:

- **Space gap.** Most of the world's electronic equipment is produced in China and Japan but the buyers of these items are located all over the world. If these electronics manufacturers want to sell their products they must offer them in the geographical areas where their customers are. Therefore, a geographical space exists between the place of manufacture and the place of consumption – or between the manufacturer and consumer!
- **Time gap.** This refers to the gap between the time of production and the time of consumption. Take vegetables, for example: some vegetables are grown only in certain seasons of the year. By making these vegetables available in frozen and canned form, the time gap is overcome.

- **Information gap.** If the consumer does not know about a product they cannot buy it. So if the consumer is not informed that Edgars stocks men's deodorants they will not look for it there! Edgars can bridge this information gap by using print or electronic media to inform the market of the fact that it offers men's deodorants.
- **Ownership gap.** Until such time that the product is paid for, the ownership resides with the seller. If you go to a computer store and purchase a laptop, you become the owner of the laptop only when it has been paid for.
- **Value gap.** The seller and buyer must agree about an acceptable exchange rate (price of the product) before a transaction takes place. If the buyer is of the opinion that the price charged for the item is acceptable and is willing to pay that amount for it, it means that the value which the buyer attaches to the product is the same as that of the seller.

In order to bridge these gaps, a number of activities need to be executed. These create opportunities for entrepreneurs who can fill these gaps. These activities can include transportation, financing, delivery, and so on.

4.2.3 Marketing activities

Definition

Marketing activities can be defined as those activities used to deliver the product to the consumer in the quickest and safest way.

The following primary, auxiliary and exchange activities can be identified.

The primary marketing activity is transport. The purpose of transport is to deliver the product to the consumer in the quickest and safest way.

The auxiliary marketing activities include the following:

- **Sourcing and supplying information.** The seller must know who and where potential buyers are. This information can be obtained by conducting marketing research. Thereafter, the seller can supply information to potential buyers by using marketing communication methods, such as advertising and personal selling.
- **Standardisation and grading.** In order to close the gap between seller and buyer, manufactured products must be designed to conform to specific norms (or standards). Agricultural products are graded according to certain qualities. Beef, for example, is graded as A1, A2 or A3 based on specific criteria. Platter's Wine Guide uses a grading system for wine, whereby a grade of one to five stars is awarded to wines depending on their quality.

This facilitates the buying process, making it easier for the buyer to distinguish between the ever-increasing varieties of products available.

- **Storage.** This is an activity that closes the time gap. The seasonal production of agricultural products necessitates storage to ensure an even consumption of these products throughout the year. Warehouses are normally used for storage. For example, seeds of various plants and vegetables are stored by co-ops from where they are delivered to farmers as needed in planting season.
- **Financing.** Costs are incurred in the transfer of products and services from sellers to buyers. These costs must be financed, usually by banks and other financial institutions. All the participants in the exchange process should strive to keep financing costs down so that the product can be presented to the consumer at a viable price.
- **Risk-taking.** The owner of the product is exposed to the risk of loss or damage. The risk is carried by both seller (before exchange) and buyer (after exchange). The owner can take out insurance as a form of protection against risks, such as arson or theft. The exchange marketing activities are buying and selling whereby ownership is transferred from one person to the other.

4.2.4 Relationship marketing

For any business to survive over the long term, relationships with a number of stakeholders are needed.

Important

The entrepreneur needs to make sure that these relationships are cultivated and nurtured over time to ensure the survival of the business. Relationship marketing is the sum of marketing efforts by a manufacturer, producer or supplier aimed at the establishment, development or maintenance of successful exchanges with a customer over time.

The ultimate aim of all businesses is to build relationships with their customers and to generate loyalty from them. These loyal customers can form the lifeline of any business, as they generate repeat sales and serve as marketers for the business. All the efforts of a business should be geared towards building these relationships. Everybody employed in all sections of the business must cooperate to ensure the fullest possible consumer satisfaction with product quality and service excellence. Relationship marketing means that the market offering must be expanded in order to differentiate it successfully from that of competitors and to ensure a greater degree of consumer satisfaction through long-term, sustainable and mutually beneficial relationships.

Relationship marketing represents a broader view of the market and the marketing task. It has evolved because of consumers' needs for honest and open communication from businesses, and not only lip-service to the marketing concept.

4.2.5 Defining marketing

First, it is imperative to have a good understanding of the nature and extent of the marketing process before one can clearly define marketing. While it is true that no two commentators agree on the same formulation of a good definition of this complicated process, the following definition best serves our purposes:

Definition

> ***Marketing*** in simple terms means the understanding of the needs of the consumer, and an attempt to satisfy these needs by means of mutually beneficial exchange processes in a profitable way and more effectively than competitors by means of efficient managerial processes.

4.2.6 The marketing process

The marketing process, which evolved from a simple bartering transaction between two participants, has become a very complex one. In large companies, there is usually a marketing department that is responsible for the marketing function. Generally small businesses do not have this luxury and it falls on the entrepreneur to perform this task themselves. All the activities discussed in the previous section must be performed by the entrepreneur or their staff in such a way as to ensure the maximum advantage for the business as a whole – a task that sounds much easier to do than it is!

There are four variables about which the entrepreneur has to take decisions: the product itself; the place where it is to be sold (distribution of the product); the marketing communication methods to be used to inform the consumer; and the price of the product, which should reflect its value to the consumer. These four variables combine in a market offering, which the consumer may decide to buy if it satisfies their needs. The four variables are known as the marketing instruments or as the 'marketing mix'. This consists of the *'four Ps'* (product, place, promotion and price). Decisions regarding the four marketing instruments combine to form an integrated marketing strategy, or marketing plan. The marketing strategy for a specific market offering is directed at a group of consumers in a specific environment. It is, therefore, evident that if anything should change in the environment, the market offering and the marketing strategy must be changed accordingly.

The larger the business's target market, usually the more advantageous it is for the manufacturer and the intermediaries. In the total consumer market there are many different groups. The members of each of these groups (also called 'market segments') have more or less similar characteristics, needs and product preferences. After careful consideration, the entrepreneur selects a specific target market (or markets) from many different market segments. The market offering is often changed in one way or another to meet the preferences of different target markets. It seldom happens that a business has only a single target market.

There are usually several competitors marketing similar products and competing for the patronage of the same target markets. Market offerings often differ only slightly from one another; perhaps they may simply have different brand names. Consumers select – and purchase repeatedly – those brand names that afford them the greatest need satisfaction in terms of the sacrifice that they must make. Often the sacrifice is not only in monetary terms: sometimes, consumers are also willing to suffer some degree of inconvenience to obtain the desired brand-name product.

This is illustrated in Figure 4.2, which shows the marketing process in a business. Note the way the arrows link the environment, marketing management (the entrepreneur) and the target market.

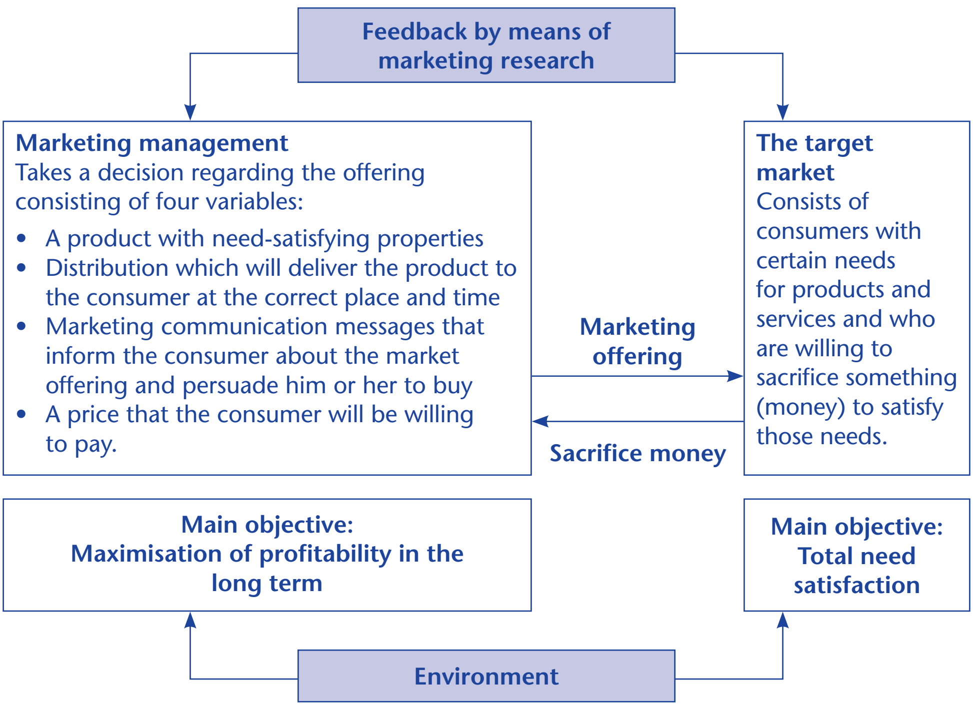

Figure 4.2: The marketing process

Source: Adapted from Cant et al (2013)

4.2.7 The marketing environment

No business functions in isolation, but operates in a marketing (or business) environment. In order for any business to survive it must adapt to its environment in such a way as to ensure long-term survival, while satisfying customers' needs.

Definition

The ***marketing environment*** can be defined as all the variables or factors that impact directly or indirectly on the marketing activities of a business. These variables or factors may be either controllable or not controllable.

All businesses operate in a dynamic environment, which means that a business has to constantly monitor the variables to determine their impact on the business, its customers and its competitors. Society largely depends on businesses to satisfy its wants and needs. Businesses, on the other hand, depend on their environments to supply them with the resources that they may need, including labour, capital and raw materials.

Businesses and society, therefore, influence each other through this exchange and depend on each other for their existence. This mutual dependence makes it important that businesses establish sound relations with the community, and vice versa. The outside environment is, however, very complex, and the business has little, or no, control over most of the variables within it. The only *constant* in the environment is *change*.

The marketing environment consists of three components:

- **The micro-environment.** This environment can be defined as all those internal variables that can be controlled by management, such as the staff to be appointed, funds to be used, the mission and the marketing objectives of the business.
- **The market environment.** This environment can be influenced or partially controlled by management, and refers to those forces outside the business, such as consumers, competitors and suppliers.
- **The macro-environment.** This refers to the external forces that the individual business has no control over, but which directly or indirectly influence the business, such as economic, political and technological factors.

The variables and forces indicated in Figure 4.3 influence the business and constitute the marketing environment. For a business to be successful it must be aware of the influence that these variables have on it, and it must have sufficient knowledge to steer it in the right direction.

The entrepreneur should, therefore, not only look *inwards* at the micro-environment to identify *internal* environmental variables, but also look *outwards* to identify *external* variables. They must realise the effect of such variables on decision making. A 'SWOT' analysis must be conducted to determine internal strengths (S), weaknesses (W), external opportunities (O), and threats (T).

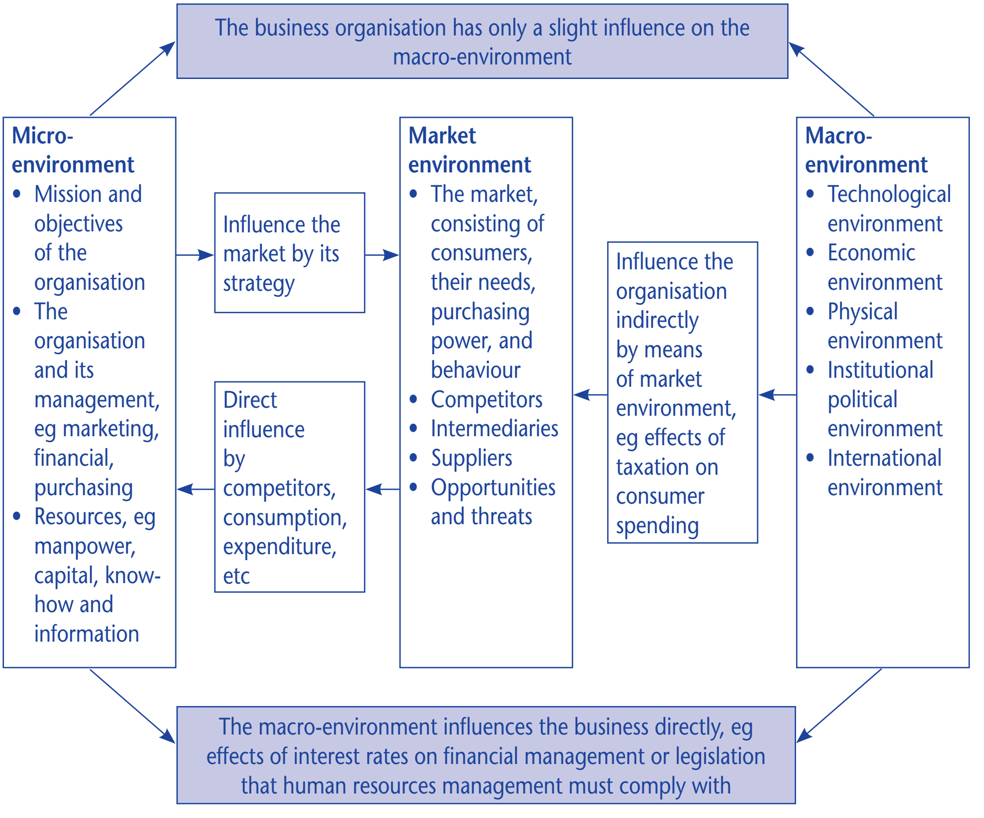

Figure 4.3: The marketing environment

Source: Adapted from Cant et al (2013)

The mission

A business is defined by its business mission. Only a clear definition of the mission and purpose of the business makes realistic business objectives possible.

Businesses simply cannot survive if they do not know where they are going and what products or services they offer. A mission defines the fundamental, unique purpose of a business and identifies its products or services and customers. A mission statement is a business's declaration of its 'reason for being'. Many entrepreneurs do not give adequate attention to this, and as a consequence can experience problems in focusing on the type of business they should be in.

The mission statement provides a concise explanation of a business's product market position, including the products offered and the markets served. It also gives clear guidelines on where the resources of the business should be applied to achieve this mission.

Questions that need to be answered when formulating the mission are as follows:

- Who is the customer?
- What does the customer buy?
- Where is the customer located?
- How does the customer buy?
- How can the customer be reached?
- What does the customer regard as value for money?

Clearly, a business's mission statement should be more concerned with its customers than with other factors.

Marketing objectives

The setting of marketing objectives is essential if a business wishes to meet its ultimate goal of profit maximisation. Without an objective the business cannot hope to succeed and will have no direction. The entrepreneur must ensure that they clearly state the objectives of the business in such a way as to measure progress. Without specific and definite objectives to aim for, there is no reason to exist.

All objectives need to meet five requirements, and must be directly linked to the mission of the business:

1. Objectives should relate to a single, specific topic. An objective should not be vague, for example, 'We want to be the best guesthouse in the area'. A good objective would be 'We want to achieve a four-star status', as this is something that can be measured.
2. Objectives should relate to a result, rather than an activity to be performed.
3. Objectives should be specific and measurable. This means that the objective must be stated in specific terms, for example, 'to have a total of two million loyalty cardholders in three years' time'.
4. Objectives should be challenging, yet achievable. All too often, entrepreneurs set objectives that are not reasonable, and if not attained these can demoralise both management and employees. It is thus important not to set unrealistic objectives.
5. Objectives should be set within a time frame (usually one financial year).

The variables in the market environment

The market environment refers to the second environment, which is found just outside the micro-environment. This environment can be regarded as semi-controllable, and consists of suppliers, consumers and intermediaries. The entrepreneur purchases merchandise from suppliers and sells it to consumers. The consumer has alternatives to choose from as a result of competition in the marketplace.

It is important for the entrepreneur to understand the interaction between the business and its market environment. We therefore need to examine the variables in the market environment more closely.

Suppliers

Suppliers are an important link in the business's customer value delivery system. Without suppliers, the business will not be able to meet its obligations to customers. Suppliers provide a business with goods and services that are transformed by the business into value-added products for customers.

Customers

If you do not have customers for your product or service, you cannot be in business! The customer is the focal point of the business, and the business should focus its attention on meeting the wants or needs of the customer if it wishes to stay in business. Understanding the customer requires in-depth analysis of needs, spending power and behaviour patterns.

A market consists of people with needs who have money to spend and the willingness to spend that money.

Many entrepreneurs establish their businesses on identified needs or gaps in the satisfaction level of customers. Changes in market composition or changes in consumer needs may create certain opportunities which, if taken advantage of, could lead to the long-term survival and growth of the business and the creation of a new business.

Types of market

The business can operate in five types of customer market. These markets consist of final consumers or customers, namely:

1. **Consumer markets.** These are individuals and households who buy goods and services for personal consumption.
2. **Industrial markets or business-to-business markets.** These are made up of businesses that buy goods and services for further processing or for use in their own manufacturing process.

3. **Reseller markets.** These businesses buy goods and services and resell them at a profit.
4. **Government markets.** This type of market is made up of government agencies that buy goods and services in order to produce public services or transfer these goods and services to others who need them.
5. **International markets.** These are foreign buyers, including consumers, producers, resellers and governments.

All of these markets present opportunities for the entrepreneur.

Competitors

Defining competitors too narrowly can be a fatal mistake for the entrepreneur. It is important that you realise that the customer has various needs. If, for instance, you offer take-away foods, your competitors are not limited to other take-away outlets. You can go as far as to say that the competitors include clothing stores, the lottery, bookstores, and so on. The reason for this is that all of these stores are competing for the rand in the consumers' pockets. As long as the consumer has not made up their mind as to what they will be spending their money on, these products are also in competition. The consumer wants a takeaway, but also needs a new T-shirt (clothing), a new book to read (bookstore) and wants to go to the movies (entertainment). When the customer decides to buy a takeaway, only at that point does the competition become other fast-food outlets. It is, therefore, important that the entrepreneur gives the customer a reason to buy at their outlet.

In most instances, competition determines the price for which a product can be sold.

Competition can be defined as a situation in the market environment in which several businesses offer similar kinds of products or services and compete for the business patronage of the same customer. Competition includes all the actual and potential rival offerings and substitutes that a buyer might consider. It is essential that the business does not define its market too narrowly, as this may limit its target market.

Competition has its positive aspects. It can help to keep excessive profits in check; it stimulates higher profitability; and it leads to better service and encourages technological innovation.

4.2.8 Market segmentation

After the entrepreneur has gathered the above information, they must decide which segment of the market to approach. In most instances, the entrepreneur does not have sufficient money or resources to penetrate more than one segment. It is also seldom that one single product will be suitable for all segments. The aim of segmentation is, therefore, to group customers together where the wants and needs of the group are similar. From the various market segments, you can choose a specific market segment or segments at which you will direct your product or service.

Definition

Market segmentation can be defined as the identification of subsets of buyers within a market who share similar needs and who have similar buying processes.

The market for a guesthouse could consist of family groups, business travellers, conference groups, international travellers, and so on. Each of these segments has different needs, and will require different offerings from the business.

It is important that the entrepreneur is aware of the various ways in which consumer markets can be segmented.

In the first instance, there is *geographic segmentation*: the market is divided into geographic regions, such as provinces, towns, cities and suburbs.

Secondly, there is *demographic segmentation*, which means dividing the market according to criteria such as age, gender, religion, race, income and family lifestyle.

Example

Mi-Way launched a car insurance product aimed specifically at female drivers and made a point of excluding men. This is an example of demographically segmented marketing.

The third basis for segmentation is *psychographic segmentation*. This examines how a person thinks, feels and behaves, and uses personality, lifestyle and values as segmenting variables.

Lastly, there is *behavioural segmentation*, which is based on a number of behavioural measures, such as benefits sought, purchase occasions, user status, usage rate and loyalty status.

Table 4.1 gives some examples of how different variables, such as age, education and gender, can be used with the Living Standards Measure (LSM) classification to segment the market.

Table 4.1: Demographics of the SAARF AMPS® Universal LSM Groups

		1	2	3	4	5	6	7	8	9	10
INFORMANTS		284	613	820	4 230	1 515	2 083	1 500	1 222	1 585	1 556
POPULATION ('000)		2 106	3 803	3 843	4 570	4 141	4 367	2 386	1 739	1 977	1 724
		%	%	%	%	%	%	%	%	%	%
AGE:	16–24	27.3	30.1	30.9	30.8	27.4	23.7	22.9	22.1	19.9	19.0
	25–34	18.8	25.9	22.7	28.0	26.9	26.0	23.2	24.0	21.6	15.7
	35–49	24.2	22.7	24.1	24.0	28.0	29.3	28.4	27.9	28.1	36.6
	50+	29.7	21.4	22.2	17.1	17.7	21.0	25.5	26.1	30.4	28.6
COMMUNITY:	250 000+	–	2.0	15.0	25.0	35.3	54.5	59.0	62.2	61.0	67.1
	40 000–249 999	–	2.3	5.7	11.8	17.5	21.7	21.8	20.6	20.5	16.0
	500–39 999	–	6.1	10.8	17.2	22.5	14.6	14.3	11.3	11.6	11.7
	Less than 500	100.0	89.5	68.5	45.9	24.7	9.2	4.9	6.0	6.6	5.1
EDUCATION:	None	23.5	16.6	9.6	6.3	2.2	1.2	0.4	0.0	–	–
	Primary	38.9	30.7	27.9	20.7	16.8	9.6	5.1	2.7	1.6	0.7
	Some high	33.8	42.7	45.1	50.3	48.9	45.4	38.1	31.7	28.8	18.4
	High completed	3.8	9.1	16.3	19.1	27.0	32.2	39.5	39.1	38.1	35.0
	Post matric	–	0.9	1.1	3.6	5.1	11.6	16.9	26.5	31.6	44.8
GENDER:	Male	41.4	47.3	51.9	51.8	49.6	52.6	48.8	47.9	49.0	50.6
	Female	58.6	52.7	48.1	48.2	50.4	47.4	51.2	52.1	51.0	49.4

Source: SAARF AMPS® (2005)

4.2.9 The marketing strategy

After deciding on the segment to penetrate, the entrepreneur must decide on a strategy to penetrate this market.

Example

The strategy is referred to as the **marketing strategy** or the **marketing mix**. The marketing mix refers to the combination of the product, price, place (distribution) and promotion – known as the 'four Ps', as discussed previously – and must be combined in the most suitable manner to ensure the sales of the product or service.

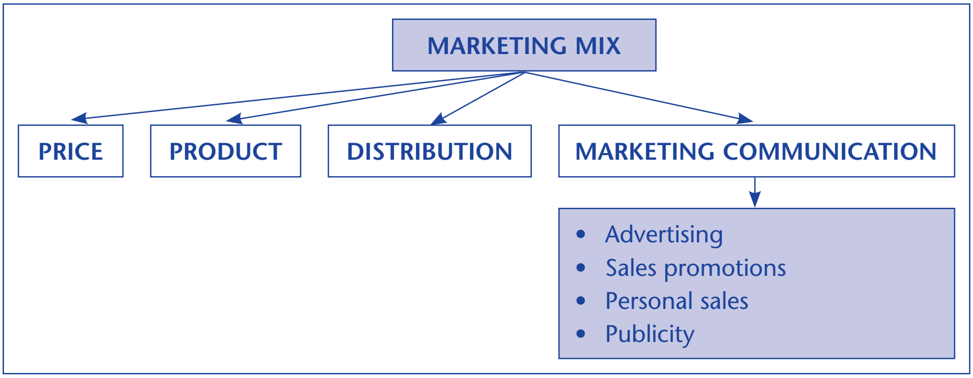

Figure 4.4: Elements of the marketing mix

Source: Kotler & Keller (2009)

The four Ps

1. **Product:** the product is the offering made to the market based on an identified need or opportunity. The product includes, among other things, the physical item, the colour, size, packaging, guarantees, after-sales service, installation and quality. For an entrepreneur this will be the product/service that they will sell to the client.
2. **Price:** this is the value attached to the item by the entrepreneur, ie what the customer must pay for the item. Price should, at the very least, cover the cost of the product and make a contribution to profit, but, at the same time, it must also be competitive and in line with the quality and image of the product.
3. **Distribution (place):** making the product available to the market. The entrepreneur might decide on a single location, or multiple locations. Distribution bridges the gap between manufacturing and consumption.
4. **Marketing communication (promotion):** for the entrepreneur to be able to sell his or her products the market needs to be informed – ie you need to communicate with the potential consumers. The methods that can be used include advertisements placed in the media; sales promotions, such as special offers, discount coupons and gifts; the sales staff that you train and use, and the publicity that you obtain from sponsorships.

This is a brief explanation of what marketing involves. As an entrepreneur, however, you want to know how you can plan, organise and control the marketing function in your business. In the following section, we look at how the marketing plan is drawn up.

4.3 The marketing plan

Entrepreneurs can virtually guarantee their own success in any business if they know what their customers want, where they are going, how they will get there, and what they will do once they arrive. It is for this reason that marketing is so important. The marketing plan is a detailed strategy of how a product or service will be marketed and the time-related details for carrying out the plan.

By drawing up a marketing plan, the entrepreneur will:

- be able to identify changes in the environment and determine ways of reacting to them
- have a better understanding of the position of their business in the market as regards consumers and competitors
- have a better idea of their objective and how to achieve it. In other words, they will use their plan as a type of guide or road map to reach their goal

- establish how to obtain resources for their intended plan
- keep staff informed about what is expected of them.

Developing a marketing plan entails a number of steps, and these must not be confused with a business plan. These steps are discussed in the next section. In order to be useful, the plan should be as specific as possible in all respects. Although a number of approaches can be followed in developing a marketing plan, the steps shown below are sufficient.

Steps in a marketing plan

1. Executive summary
2. Market analysis
3. Market segmentation and target market selection (including SWOT analysis)
4. Marketing mix
5. Promotional mix
6. Marketing results and support documents
7. Implementation

4.3.1 Executive summary of the marketing plan

The executive summary briefly describes the marketing plan; the product or service that you offer; the target markets; the level of sales and profit margins that you hope to achieve, and who the competitors are. The marketing and promotional mixes also need to be described, as well as the strategies and tactics.

Important

Many people, including investors and bankers, will read the summary first; if it does not interest them, they will not read the rest of the plan. The summary must be brief, concise, to the point and easy to read. It includes the who, what, when, where, how and why. For example, the executive summary of a new restaurant's business plan would include references to its client base, the competitors, the unique differences the restaurant has to offer, and the service expectations of the management that will differentiate the restaurant from competitors. It would go on to answer questions such as who is involved, what length of time the plan represents and how the goals will be met.

More specifically, the summary must cover the following:

- description and rationale for the plan
- background to the product or service

- anticipated market, sales and profits
- competitive position, market niche and market share.

4.3.2 Market analysis/situation analysis

This section of the marketing plan uses much of the same information as the business plan. The items that need to be covered in this section include:

- market research results
- market demand/attractiveness analysis
- product life-cycle stage
- business analysis
- competitor analysis
- customer analysis
- cooperator analysis
- product analysis
- target market selection criteria
- customer characteristics.

Market research

Market research is essential to the success of any business. It does not have to be expensive; the information can be obtained through existing sources, or by means of primary research. Normally, to gather primary information, surveys are conducted on a limited scale. It is important that you research the demand or need for what you are trying to sell or offer to the market. This part of the plan should be a summary of the findings of your market research.

Market attractiveness

This part of the plan describes how attractive the market for your product or service is. Do customers want the product? Will they buy it? Do they see a need for it? These are the typical questions that need to be answered. A market can be evaluated on the following criteria:

- size of the market
- growth potential of the market
- how easy it is to reach customers
- whether the customers can afford the product
- how easy it is to enter the market
- level of competition.

Each of these criteria can be rated on a scale of 1–5 to assist in making a decision.

Product life cycle

All products and services have a life cycle that moves through four stages: introduction, where the product/service is new, with few, if any, competitors; growth, where the demand for the product, awareness in the market and profit increase; maturity, where there are many competitors, some of whom leave the market; and, finally, the decline phase, where the need for the product wanes fast and profits are greatly reduced.

Each phase requires different strategies and tactics. In the introduction phase, for instance, high prices can be charged and only a limited assortment may be offered; in the maturity phase, prices may be reduced due to the higher level of competition in the market; and in the decline phase, the advertising of the product may be stopped altogether as it is being phased out of the market.

Business analysis

Important

A SWOT analysis is a useful instrument for helping managers to identify internal strengths and weaknesses of a business and external opportunities and threats facing it. SWOT is an acronym: S = strengths; W = weaknesses; O = opportunities; T = threats.

A SWOT analysis is based on the assumption that an effective strategy maximises the strengths and opportunities of a business and minimises its weaknesses and threats. Strengths should be matched to opportunities, and threats should be seen as challenges. However, all factors in a SWOT analysis are not of equal value.

The aim is, therefore, to identify those *critical* factors that can have a major effect on the business. The business should then build on vital strengths, correct obvious weaknesses, exploit significant opportunities and avoid potentially disastrous threats.

Competitor analysis

The competitor analysis begins with a SWOT analysis of the top three competitors. The characteristics of each needs to be compared to that of one's own business. It is important that the geographical location, target markets, marketing strategies, marketing mix, products on offer and market share are all evaluated. Information is available from advertising agencies, news media and the internet, among other sources.

Customer analysis

A crucial part of the marketing plan is to perform a customer analysis. You need to know who your customers are, where they come from, what and how they buy, when they buy and what is needed to maintain their loyalty to you. If entrepreneurs don't know their clients' needs and preferences, they won't be able to satisfy them.

Cooperator analysis

Few companies cover this in their plan, but it can be a potentially lucrative arrangement. Cooperators include suppliers, outside salespeople, volunteers or anyone who cooperates in making the business successful.

Product analysis

This focuses on what you are selling to the customer. For each product you need a mini-marketing plan, where you address the target market, costs, service levels, distribution channels, customers, and so on.

Target market selection criteria

If you are aware of a market need that has not been met – for example, the lack of a coffee shop in a particular area – you may decide to go after the gap that exists. This means that you have to make sure that it has potential for you and that it will be financially viable.

Customer characteristics

Customers can be analysed according to various criteria. The criteria used to determine if a business is viable may include geographic, demographic, psychographic and behavioural criteria (this has been discussed previously). Other criteria that can also be used may include rand volume, or size of the market and buying influences.

After the market has been segmented and a market – or markets – selected, you must develop a separate marketing plan for each.

4.3.3 Setting objectives and developing the marketing mix

In this step, you need to set your goals and the strategies to achieve them.

You should be able to form a clear picture of what you want to achieve in the marketing of your product or service. This picture should be clearly set out in objectives.

Remember the following requirements of objectives:

- They must be realistic, practical and achievable.
- They must be quantifiable. This means that you must be able to reproduce an objective in figures. These may, for instance, be the percentage by which sales must increase.
- They must be linked to a certain period.

Example

Examples of objectives

- To increase real turnover (that is, the turnover that remains after deducting inflationary increases) by 10% over the next year.
- To expand the current market by 10% within the next six months through marketing communication.

After you have determined the market situation, done a marketing analysis and set objectives, you need to determine the marketing strategy.

Example

How will the owner of a butchery draw up a marketing strategy for the business?

Market segment

The entrepreneur will expand the current market segment by stocking additional products, such as bread rolls, wine, vegetables (pre-cooked), or offering services such as the processing of game meat, or a delivery service to meet the market's needs.

Product

The entrepreneur may look at offering complementary products such as mentioned above, or stock spices, or offer to do spit-braais at functions – or rent out the equipment.

Price

Prices must be competitive, but may be differentiated by means of added services.

Distribution

Sales are made directly from the shop, so distribution is not a consideration in this example.

Marketing communication

The entrepreneur needs to continue advertising so that consumers are continually reminded about the butchery. The entrepreneur should also make use of a range of methods of advertising, such as leaflets, store signage, dustbin advertising and local media.

Sales promotions

Special promotions can be held periodically. The shop can distribute pamphlets every three months, advertise specials on hindquarters or family packs of meat.

Publicity

Publicity can be secured by getting involved in community services and making donations to the needy.

Sales staff

Train staff in customer service, upselling and complementary selling.

4.3.4 Action plan

The action plan is a map of what you want to achieve and how you plan to go about it.

This step is very important. If it is not followed, the marketing plan will be useless. The action plan shows the following:

- the steps to be followed
- the person(s) responsible for carrying out each of the steps
- the expected completion date of each step, showing the expected duration of each step
- how the success of the steps will be measured.

The entrepreneur must also make specific people responsible for carrying out certain actions. A date must be attached to each of the actions so that the person responsible knows by when the action must be completed.

4.3.5 Budget

The devices used in the marketing plan should be in line with what has been allocated to it in the budget. In the business's budget, such an amount is indicated as a subtotal under 'marketing and advertising'. In this step, you will now show how this amount will be spent on marketing activities over a certain period, for instance on advertising, employee training and sales promotions.

4.3.6 Control

Control must now be exercised to ensure that the set objectives are achieved. Control must take place regularly, because the plans do not make provision for unforeseen circumstances and adjustments that must be made. In this way, you can also determine whether the plan of action is a success or not. You need to study your sales figures to determine whether you have achieved the set objectives.

4.4 Summary

The marketing function is a complex, crucial process for any business and is made up of several components. Once you understand these components, you will have a clearer idea of the importance of marketing in the business. We have indicated where marketing fits into the business. Certain marketing concepts have been explained to help you to draw up a marketing plan.

The marketing plan needs to be approached as a step-by-step process. Like a road map, it serves to guide you to where you want to be and how you should set about getting there. Once you follow these steps, you will be able to draw up a plan of action for marketing your product or service in a practical and structured manner.

Questions for self-evaluation

1. Explain what is meant by the terms primary, auxiliary and exchange marketing activities.
2. Discuss the four elements of the marketing mix, and indicate how it fits into the marketing plan.
3. Discuss the elements of the macro-environment and indicate how it can affect the actions of the small business.
4. The executive summary briefly describes the marketing plan and must include important information. Briefly describe the information to be included in the executive summary.
5. To do a market analysis/situation analysis, certain important items need to be considered. Name and discuss these.

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Operations management

5 CHAPTER

Learning outcomes

After studying this chapter, you should be able to:

- understand operations management (OM) in its widest context
- explain the dynamics of OM and innovation
- list the five basic functions of OM
- list the principles of OM that promote value, time and lean production
- describe the three areas of planning and control of the operations transformation process
- define process management and the lead-time elements of a process
- list the typical OM performance objectives
- distinguish between the elements and components of productivity and increased productivity
- distinguish between lean and agile supply
- distinguish between the three main categories of operations systems
- identify layout types
- do fixed capacity planning and adapt capacity
- do basic production scheduling
- understand the concepts of operations improvement and total quality management (TQM)
- understand the basic principles of maintenance and safety, health and environment (SHE) management.

5.1 Introduction

Quote

'Operations Management (OM) is very challenging and satisfying because it creates all valuable, therefore sellable things, and everyone lives by selling something. OM is, therefore, for those who like to be creative and make things happen … not for those who only dream, watch things happen and wonder what happened!'

Source: Sarki Jétehm, in Krüger & Steenkamp (2008: 13)

Not all legendary leaders in world history were entrepreneurs as such, but many of them showed entrepreneurial abilities. We have a rich heritage of examples of such leaders. Thomas A Edison, Walt Disney, as well as Sergey Brin and Larry Page from Google, were all more than mere entrepreneurs. Many spiritual leaders such as Constantine the Great, John Wesley, Charles Spurgeon and Dwight Moody have also displayed unique abilities by starting and building churches and congregations.

These legendary leaders and other well-known present-day entrepreneurs such as Bill Gates, Richard Branson, Adrian Gore and Warren Buffett have a lot to teach us. They all have unique legacies, philosophies and 'lessons for greatness'. But all of them have one thing in common – creativity. Howard Schultz (CEO of Starbucks) focuses on investing in people who can be creative. Adrian Gore (CEO of Discovery Holdings) believes in pushing people to look for innovative solutions and to create value for all involved. Richard Branson believes greatness moves past the conventional. All these leaders have a wide variety of good ideas and multiple operations (for example, the Virgin companies) to make things happen.

Definition

Creating good ideas, making products and providing services are the ultimate purpose of any business, and all managers are, in fact, operations managers. ***Operations management*** (OM) is the business function that concerns making products and providing services. 'Production management' was the term used in the past for the manufacturing of products. Today, we use the term 'operations management' to cover both manufacturing and service delivery businesses.

Operations management is exciting because it is at the centre of so many of the changes affecting the modern business world. There has not been a time when operations management was more topical or more at the heart of any business. Promoting the creativity and innovation which will allow businesses to respond to all the market trends and changes is becoming the prime task of operations managers (Pycraft et al 2010: xv).

This chapter focuses on general OM terms, core concepts, principles and functions. It will help any student in entrepreneurship who is unfamiliar with OM to establish a learning foundation for what is also called 'POM' (production and operations management). The emphasis is on the basic OM body of knowledge which will meet the needs of entrepreneurs, who usually start small. The contents will be focused on important OM principles and typical small business operations rather than on large, complex systems, large projects or continuous mechanised operations.

In addition, this chapter will help students to master core OM concepts and prepare entrepreneurship students for the real business world. Economies are dependent on small businesses, value-adding activities, inventions, service operations and production. No business, not even a small franchise, can exist without a value-added operation. Business management centres on OM, and without this function no other business function or supply chain is viable. The following section emphasises the importance and dynamics of OM.

5.2 The dynamics of operations management

Operations management (OM) gets as close as we can in business life to the act of creation. OM is at the heart of any economy because it is concerned with creating the products and services upon which we all depend. OM is about change, creativity, productivity and adding value. Since this is the very reason for any business's existence, operations management should be at the heart of its affairs.

If we had to choose the top seven innovations in history, they would most probably include the light bulb (1829), the telephone (1876), the bicycle (1886), the radio (1897), the television (1923), the computer (1945) and the World Wide Web (1989). The following are some examples of creative ideas that were transformed into top inventions by South Africans:

- The idea of having a device (process technology) that would clean a swimming pool for you. Kreepy Krauly is an automatic pool-cleaning device that was originally a South African invention, and is now owned by an American company. Operations skills made the idea a reality. Other pool-cleaning devices which originated in South Africa include brand names like Baracuda and Pool Ranger.
- The need for glue that really does the trick. Pratley Putty is a two-part clay-like epoxy which bonds into a very hard and strong compound. Operational skills made this idea an invention.

- The idea to increase the sales of pure fruit juice. Appletiser and Grapetiser are pure fruit juices in a sparkling format.
- The idea of being able to buy tickets in advance for entertainment events. Computicket became the first computerised ticket-sales system in the world. People dislike standing in queues, so the idea was a way to solve this problem (South Africa at a glance 2006).

There are also many examples of industrial products. Noise-induced hearing loss (NIHL) is a worldwide pandemic that has provided several opportunities for entrepreneurs (Lotter 2011). The need to protect industrial workers from noise pollution (and possible hearing loss or deafness) led to an improved hearing protector that is personally sized and fitted. Unlike conventional – and ineffective – 'one size fits all' earplugs, the Noise Clipper was designed, patented and produced to be comfortable, custom-made and durable. It is now regarded as part of 'best practice' hearing conservation. Operational teams visit mining operations and fit workers with this device on site.

Today, several incubator programmes are under way to create 'idea factories', to breed creativity and to incubate new technologies. The Innovation Hub in Pretoria was established to enable institutions and businesses to leverage their collective skills to create a whole that is greater than the sum of the individual parts. Silicon Valley, in California, is almost synonymous with innovation, and has a record of developing, marketing and exploiting new technologies. In the last 50 years Silicon Valley has produced such famous innovations as the personal computer (Apple), 3D graphics (Silicon Graphics) and database software (Oracle). Companies such as Disney, Swatch, Google, Crocs, Virgin, Sasol and Kohler are also well-known for their innovative abilities.

Operations management involves the following primary functions:

- product and service design (demands creativity)
- demand and capacity planning
- operations system design (demands creativity)
- production planning and control
- improvement, problem-solving and maintenance (demand creativity).

All entrepreneurs and managers, irrespective of their job title, create products and services for customers. In this sense, all managers are operations managers. Slack et al (2004: xi) state how challenging OM is becoming. Managers have to deal with technological and environmental challenges, the pressures to be socially responsible, the increasing globalisation of markets and knowledge management. All of these challenges signal a positive message to potential entrepreneurs. They do not need to or have to, but they can get involved if they want to.

Many people have good ideas which they find difficult to operationalise. Brainstorming sessions in general are fun, interesting and usually produce several good ideas, which are, unfortunately, seldom realised in practice because of a lack of technical and operational skills. Creativity should, therefore, go beyond good product, market and advertising ideas: it must especially focus on operations.

Creative ideas can have a large impact on operations – on the processes (optimising, simplification and streamlining), product packages, systems, technology, infrastructure, layout, resources and combinations of all these. If simple techniques, like learning to think and innovate, can generate ideas causing significant savings or improvements, then one can understand why OM is associated with the excitement experienced by innovative businesses. It can have an enormous financial impact on a business. Researchers, therefore, need to live in an environment in which ideas spawn new concepts that, in turn, lead to new products and new technology or system designs, which may lead to improved or new business operations.

All operations have certain 'creative' process technologies, which assist the transformation process and make production easier. Here we refer to all sorts of machines, alarms, gadgets and gauges to support the primary process. Trolleys, scales, racks, cleaning tools, mechanical tools, calibration of filters and machinery set-up are a few examples.

5.2.1 Creative designs inherent in operations

Everything that exists started as a design. Good things come from good designs and good OM. Conversely, bad things usually originate from bad designs. A good construction business can hardly build a good house if the design is not good. It is difficult, or even impossible, to improve faulty designs of products or systems. If the re-engineering of a design is not necessary, the original design was not too bad. OM therefore includes the science of design.

In general, one must design for cost-effectiveness. The durability of an acrylic product (such as a custom-made hearing protector) makes it much less costly over a short period of time than a disposable foam earplug.

5.2.2 Technology and innovation

Technology is preceded by innovation. Entrepreneurs usually have a liking for new developments, either to help them with their business idea, or to create and market their own technology. Technology is associated with new gadgets, devices, machines or processes which make life easier. Technology involves all applicable operations, materials and knowledge in order to satisfy a need, with a view to improving people's private or work environments. This includes discoveries and inventions, provided that they can be applied economically.

5.2.3 Innovation management

Entrepreneurs are innovative, and innovation management is about value-capturing and value-creation. It is challenging because innovation is not simple or inevitable. Innovation is not a linear process and those who follow one track are unlikely to be successful. Innovation is a complex mystery that is difficult to define (Addison 2005: 14). Innovation is a process and the result of a successful invention. Innovation is the planned action of bringing about new ideas, processes, products and services. Innovation is associated with terms such as re-creation, adaptation, imitation and invention. Innovation can be regarded as the DNA of the modern firm because the notion is to innovate or stagnate. Innovation always implies creativity and change, but innovation must be purposeful and systematic.

5.2.4 Innovation behaviour

The power of innovation is within every entrepreneur's reach. It is mostly an individual sport because behind each idea is an individual's mind. It is regarded more as a talent than as a skill. It is a raw ability that requires space, nurturing and discipline. Innovation is not for everyone because it operates on the quantum level, which is at the powerful end of the intellectual spectrum. Terrible economic times are no match for innovation, and innovation becomes more apparent under such circumstances. The ever-present force within individuals will begin to emerge, because innovation is irrepressible (Meyer 2010: xvi).

Ilbury and Sunter (2001) refer to the fox within us, noting that world-class companies tend to be run by 'foxy' CEOs. They compare the hedgehog with the fox. Hedgehogs live in one burrow, in one home and in one manner. Once programmed on an idea, they cannot shake it off. Foxes believe life is all about knowing and experiencing many things. They forage for new ideas and explore new routes. They also rely on intuition and imagination. Foxes will react more quickly, and their intuition and readiness helps them to survive in a rapidly changing environment. Innovators adopt a 'fox-like' approach.

5.2.5 Value and time are of the essence for any operation

No factory produces goods for the sake of staying busy, or transforms or assembles resources just for fun. All OM managers are value-driven, a pursuit during which the worth of all inputs is increased by each transformation process in the eyes of the next customer in the process. Hence, the focus of this chapter is on value and, more specifically, on its main dimension, time and the processes linked by people as value chains.

Important

The essence of any transformation process (be it micro-, macro- or any manufacturing system) is to add value and eliminate waste. This brings us to the familiar concepts of productivity, effectiveness and efficiency. All OM concepts relate to optimising resources, which implies value. Most of these OM principles relate to the well-known 'JIT' philosophy (meaning 'just in time'). JIT systems eliminate waste and promote value-adding activities, quality and a focus on lead-time reduction.

JIT, other than agile supply, is also referred to as 'lean production' (to use less of everything and to focus only on adding value). Both JIT and total quality management (TQM) are seen as part of the same movement to deliver what the internal and external customer wants. Since TQM is a holistic and integrative approach to quality, it does not exclude any area of the business. It focuses on all resources, processes, products and functions, and with several objectives.

Quality 'chains' and quality 'circles' are concepts that relate to value. A value chain is the ideal series of transformational processes whereby each step increases the value of an item. OM promotes a systematic approach (eg value analysis) to reducing the cost of a product without impairing its quality, value or function. OM also teaches the theory of constraints so as to maximise flow rate through bottlenecks and constraints.

The following OM principles (based on Schonberger & Knod 2001: 64–71) promote value and save time:

1. Know and team up with the next and final customer. This principle implies breaking barriers and building relationships. It refers to the customer as the next process.
2. The entire business must become dedicated to continual and rapid improvement in quality, cost, response time, flexibility, variability and service.
3. The entire business must have a unified purpose via shared information and team involvement in the planning and implementation of change.
4. Reduce the number of product or service components and operations (processes) and the number of suppliers to a few good ones.
5. Operations design entails organising resources into multiple chains of customers, each focused on a product or service (or 'customer family'); creating workflow teams, cells and 'plants in a plant'.

6. Capacity involves utilising human resource potential and creativity by investing in human capital (as the internal customer); ‘quality of work-life’ (QWL) means investing in cross-training for mastery of multiple skills.
7. Capacity entails maintaining and improving present equipment and human capital before considering new resources and automating incrementally when process variability cannot be reduced by other means.
8. Process management entails aiming for streamlining and simplicity by making it easy to provide goods or services without error or any process variation.
9. Cutting flow time (lead time, waiting time, etc), distance and inventory (sub-assemblies and idle work in process) along the chains of customers.
10. Cutting set-up, changeover, get-ready and start-up lead times.
11. Just-in-time production, or at the customer’s rate of use; decreasing cycle intervals and lot size.
12. Recording and processing one’s own data at the workplace and ensuring that front-line improvement teams have the first chance at problem-solving before experts are brought in.
13. Cutting administration and reporting; controlling the causes, not the symptoms.

5.2.6 The entrepreneurial university of the future

Most universities promote academic engagement with industry for various reasons (eg to generate a third stream of income). Many universities (public and private) deliberately choose to be (or not to be) entrepreneurial universities. There are several examples of entrepreneurial universities in Belgium, the Netherlands, Germany and Finland. Scotland’s Strathclyde University was the entrepreneurial university of 2013 in the UK. Some universities in South Africa have also taken this strategic direction for various reasons. Although most universities teach entrepreneurship, it is regarded that the best teacher is an entrepreneur in practice. Some universities therefore assist students to obtain practical experience as part of their study programme. In many cases they are also helped with the start-up and funding of the new business.

University-industry innovation networks (UIINs) comprise entrepreneurial universities, industry and government (Ferreira & Steenkamp 2015: 491). They organise themselves as co-productive institutions by means of technology transfer offices (TTOs), innovation centres and a variety of offices for knowledge transfer and university-business cooperation (UBC). Such a network is referred to as the ‘triple helix approach’ of cooperation between universities and other stakeholders. The aim is to build an enterprising state in which these partners co-innovate in order to solve global economic challenges. The effective management of the triple helix model takes UBC to the next level in terms of universities as successful entrepreneurs.

5.2.7 The entrepreneurs of the fourth industrial revolution

The implications of the fourth industrial revolution are immense. Smart factories will allow individual customer requirements to be met within short lead times. Last-minute changes to production will allow operations to respond nimbly to disruptions. The technology-related literature reports on multiple examples of new developments from entrepreneurs and innovation companies. Tomorrow's aircraft will be different and automation will continue to threaten job security. Automation by means of robotic sewing machines may become a reality and the use of glass (and the solar power in glass) to make electricity from sunlight is another example. Customised cars will be produced that may disrupt the automotive industry. Then we will see the pioneers of small satellites laying plans for infrastructure and services needed for travel to other planets.

Lo Presti (2015) refers to the fourth industrial revolution as having an increasing number of innovative companies. He is involved with a company which has an innovative culture, with 500 new filings (in 2014) of 15 000 patents. Their unique portfolio includes: the sensor-to-cloud value chain, engaging with a broad ecosystem, expertise in digital-security technologies, state-of-the-art semiconductor technologies and high-volume production capabilities. This includes the 'things' that leverage the internet to make it smarter, easier to use and more connected. This is done through multiple sensors and data collection for contextual awareness, processing capability everywhere, availability of very low-power technologies and addressing societal challenges (security, environmental impact and social responsibility).

Their vision is to address the quality of life of society by technologies monitoring exposure to the sun, activity monitoring and positioning, heart monitoring, fitness and optimised sports performance, early warning of illness, optimised sports techniques and impact monitoring. Their products improve the quality of living, save energy and provide entertainment.

5.3 Operations management defined

It is clear that OM is a dynamic and creative discipline. Business life is primarily concerned with creating goods and services, putting operations management at the heart of its existence. Whether micro- or macro-processes are concerned, students will realise that all managers directly and indirectly transform resources and create products and/or services for internal and external customers. Everything we see around us, that we sit on, eat, read, wear, buy or enjoy comes to us by courtesy of operations managers who planned and controlled the operations systems involved.

Important

All operations should be value-adding processes in which inputs are transformed into outputs. The single most important input-transforming resource is the human component. Human beings act upon transformed resources and are present in all operations. Productivity depends directly on human capabilities – competence, qualifications and motivation – to produce effectively and efficiently. These capabilities must be maintained and sustained. Quality of work-life (QWL) is one strategy that directly affects operations.

OM also deals with the planning and control of operations. Table 5.1 illustrates the three areas of OM planning and control:

Table 5.1: OM planning and control of three areas of the transformation process

OM planning and control of	**OM planning and control of**	**OM planning and control of**
(1) INPUTS: transforming resources (people, creativity, capital, R&D, technology, learning, market information and feedback) and transformed resources (energy, materials and clients)	(2) TRANSFORMATION SYSTEMS: • macro-processes • micro-processes • operations systems (eg service shops, work centres, assembly lines, job shops and process technologies)	(3) OUTPUTS: value, goods and services, improvements, new designs, technology, delighted markets, competitive advantages, sustainability, etc

Source: Krüger & Steenkamp (2008: 12)

Look at the following examples in Table 5.2 for a better understanding of the transformation process:

Table 5.2: Examples of the transformation process

Business type	Inputs	Transformation	Outputs
Hospital	Patients, doctors, nurses, theatres, rooms, ambulances, equipment	Medical procedures, therapy, service delivery, professional handling and care of patients, application and administration of medicine	Improved quality of life, satisfied clients, recovered and healthy patients, extended life expectancies

Bakery	Flour, sugar (ingredients), equipment (such as ovens), trained people (bakers, knowledge of recipes)	Food preparation according to specifications, machine set-up, mix, mould, bake and pack	Cakes, pies, bread, ready for delivery
Custom-made earplugs	Trained audiometrists, materials and equipment to make moulds, transport to visit factories, laboratory	Filters calibrated, soft moulds transformed to acrylic earplugs, filters and cords assembled, earplugs packed, workers personally fitted and seal test done	Personalised hearing protectors, comfortable earplugs worn with ease, noise-induced hearing loss is eliminated

5.3.1 Process management is inherent in operations management

It is important to understand that the transformation process is not confined to the factory. A *process view of the business* is important because a business is only as effective as its processes. Processes cut across departmental boundaries and this view goes beyond the main manufacturing process. This 'nested-process' concept reinforces the need to understand the interconnectivity of all processes and operations in the business. This also helps people to understand how their small contribution adds value to the whole operating value chain, which is the cumulative work of all processes in the business. Value to the customer at a loss or expense for the business is not productive, sustainable or profitable. The people in any operation are the catalyst that makes the whole operation come alive (Slack et al 2004: 121).

The processing time as such is not the only factor that determines how long it takes to complete a particular job. OM always attempts to reduce or eliminate lead-time elements in a process. The primary lead-time elements (Schonberger & Knod 2001: 584) are as follows:

- **Queue time:** The period during which a job stays in the queue at a work centre.
- **Processing time:** The actual time needed to process the job.
- **Set-up time:** The time needed to prepare equipment for processing a new job.
- **Waiting time:** The idle time between the processing of a job and its passage to the next work centre.

- **Inspection time:** The time needed to check whether the job complies with quality standards.
- **Transportation time**: The time needed to transport the job from one work centre to the next.

5.3.2 Performance objectives of operations management

Large companies, such as Mercedes-Benz, General Electric, McDonald's and Vodacom, are all known for service delivery or other features such as quality, speed or cost-effectiveness. These are referred to as performance objectives. The many dimensions of quality (such as reliability, consistency, low variability and responsiveness) can also be regarded as performance objectives.

What are the main performance objectives of OM? Besides the quality objective, operations managers also contribute to business strategy by other means. JIT is associated with advantages, such as low lead times and inventory reductions. This objective is integrated with dependability, which can be regarded as a separate performance objective. Speediness is another performance objective. Flexibility, the ability to be agile, to change and to adapt, is another important performance objective. Although productivity and efficiency (and their measures) are primarily associated with operations management strategy, the strategic operations objective could be low cost and affordability.

The tenet that 'there is no such thing as a free lunch' can be taken as the bottom line of the trade-off theory. Operations managers must consider trading off one aspect of performance against another. This trade-off model of performance has been challenged to give the best of both worlds to the market. The best example is the quality-versus-cost trade-off, which has been overcome by many operations even those in the agile supply market. The main job of operations managers is to change the part of the operation that is causing one performance objective to deteriorate as another improves, and the subsequent trade-off is the mainstay of continuous improvement.

5.3.3 Operations are central to productivity

If a small business manufactures a table ineffectively and inefficiently, it has, nevertheless, been 'productive' in the sense that it actually produced something, although the output did not fully justify the input.

Hence, we need measures of productivity, since the operations manager's key challenge will always be to increase the value of output relative to the cost of input. More output with the same amount of input increases productivity, but the same level of output using less input also increases productivity.

There are many configurations, but the bottom line is that sustainable profitability is impossible without productivity. This means the output value (usable outputs), after being exposed to a uniquely designed transformation process, must be higher than the value of the separate pieces of available inputs (resources).

5.3.4 Macro-productivity

Macro-productivity refers to the context of a nation's entire production. The Gross Domestic Product (GDP) per capita is the measure of the value of the total output of a country divided by its total population (seen as the inputs to produce the outputs).

A national economy is made up of individual businesses, and the productivity of the country is the sum of the productivity of all its individual operations. A macro-perspective on productivity management refers to the country/economy as a whole and the governance of productivity growth.

Productivity South Africa (www.productivitysa.co.za) offers many suggestions in this regard. Examples are infrastructural programmes and investments, a well-functioning legal and accounting framework, creating a market-friendly environment, research and technology support, promotion of small and medium enterprises, export trade stimulation, education and training policies, and a healthy labour market.

5.3.5 Micro-productivity

Micro-productivity refers to an individual business's operations. It focuses on how well operations perform in terms of value, effectiveness, efficiency, utilisation, impact and quality. The first measure is the ability to achieve production. Secondly, productivity is measured by means of the following quotient: 'output divided by input'.

Productivity measurement defined

It is imperative to define productivity correctly. Merely saying it is 'output divided by input' is not the whole story. One can be productive without really producing usable output. In other words, we can have high efficiency, but low effectiveness. Effectiveness is the 'how good' or 'how valuable' dimension as related to market needs. Productivity is, therefore, not only efficiency, but also the quality of inputs, resource utilisation and effectiveness.

These are terms associated with quality management, which is vital for productivity. These qualitative improvements in inputs are significant because they create sustainability, durability and stability, and cause output to increase without any additional capital or human resource inputs. This brings us to a more accurate quotient for productivity:

$$\frac{\textit{Output Income (ie usable quantity)}}{\textit{Input Expenses (ie available input quantity)}} = \textit{(P) Productivity}$$

Productivity is a complex topic because of the different types, dimensions and measures of productivity. The ability to achieve production is simply not enough. For instance, one may produce things without having a market to sell them to. An entrepreneur may manufacture hundreds of items, without selling many of them. Suddenly, the ability to produce takes on a nasty flavour.

If there is a market, then the ability to produce for that given market is also not enough. This is because the cost of manufacturing may not be viable (cost-effective). Another nasty surprise! Thus, a productive system must have the ability to be effective and efficient. Without these, it would be difficult to make sense of productivity. This means output must be effective and efficient. The danger is to focus only on one (effectiveness) at the cost of the other (efficiency).

5.4 Operations strategy and operations design

Most entrepreneurs have a broad business strategy. Strategy refers to actions or decisions that commit the business to moving in a certain direction or adopting a position in the market. Carefully made decisions that help the business to achieve its goals and those that have a high impact and particular significance can be regarded as strategies. The business's overall strategy in turn determines its operations strategy, in other words, what the business wants operations to do. Pycraft et al (2010: 60–61) define operations strategy as a top-down reflection of what the business wants to do. It involves translating market requirements into operations decisions and exploiting the capabilities of operations resources in chosen markets. This total pattern of decisions and actions formulates the roles, objectives and activities of each part of the operation so that they contribute to, and support, the business's strategy.

5.4.1 Operations design

The operations strategy implies an operations system. Entrepreneurs need to take note that their idea, product and/or service range will demand a specific operations design. Is it a small factory, a service shop, a job shop, an assembly line or a combination of several other types? The product should fit the operations design (the specific market need will determine the appropriate operations design, eg lean or agile supply).

The basic differences between a lean and agile operation are summarised in Table 5.3.

Table 5.3: Lean vs agile supply

Distinguishing attributes	Lean supply	Agile supply
Product variety and life cycle	low variety and long life cycles	high variety and short life cycle
Forecasting mechanism	algorithmic	consultative; qualitative
Profit margin	low	high
Market	predictable	volatile
Stock demand	stable long-term	immediate availability and volatile

The agile supply operation is market-sensitive and can respond quickly to demand. It needs unconventional mechanisms to hear the daily voice of the market and have direct access to customer requirements data to create a virtual supply chain that is information-based rather than inventory-based. Electronic data interchange enables partners in the supply chain to react to the same data (real demand), rather than to the distorted picture when orders are transmitted from one partner to another in the chain. The route to sustainable advantage lies in being able to leverage the respective strengths of network partners to achieve greater market responsiveness.

The operations design for very high volume and very low variety is a continuous mode of operation. The layout will, therefore, suit a highly mechanised plant. The operations design for a unique functional need, low-volume (one item) with high flexibility will suit a project mode of operation. The layout is temporary, with no clear flow lines and because the product position is fixed, the layout is referred to as a fixed-position layout. The same three dimensions (variety, volume and product scope) are used to come up with a job mode of operations design – batch-operation design or repetitive-operation design.

Product design will determine process type (intermittent or continuous), as well as layout and flow of work. The entire network of micro- and macro-processes will consist of the basic flow (and layout type), the technologies used (process technologies, equipment and machines) and the job design. Process design is not merely an assembly line. It may also include network decisions pertaining to suppliers if the business is backwardly integrated into the supply chain and decisions relating to the capacity level of each operation in the supply network.

Each operation in the network will select a process type based on the variety-volume characteristics of the operation. Small variety and large quantities will dictate a specific process type. Process type, on the other hand, will dictate layout type, although process type and layout type are not always totally deterministic.

5.4.2 Types of productive systems and their characteristics

All transformation systems convert inputs into outputs. All of these operations share the same operations management model, principles and performance objectives. These systems are also referred to as transforming resources that convert a combination of inputs – referred to as transformed resources (Pycraft et al 2010: 9). They are designed for the particular demand that will determine the system's dimensions, nature, scope and scale. This leads to different operations system designs, such as service shops, job shops, production lines, batch operations, mass services, projects and other combinations, as compared in Table 5.4.

Table 5.4: Comparison of the characteristics of the three main categories of operations systems

	Continuous or repetitive operations system	Job/batch operations system	Project operations system
Product type	Standardised	Diversified	Unique
Product flow	Standardised	According to requirements of particular product	Virtually none
Materials handling	Materials flow determinable, systemised and often automated	Handling depends on the product, therefore highly variable and expensive	Special equipment often necessary; high cost
Raw materials inventory	High turnover	Low turnover	Variable because of production time
Work-in-process	Small quantities	Large quantities	Single product
Production cost components	Relatively high fixed cost; low variable cost per unit	Relatively low fixed cost; high variable cost per unit	Relatively high fixed cost; high variable cost
Labour requirements	Highly specialised routine tasks at a specific rate	Highly skilled artisans working without supervision and with moderate adaptability	High degree of adaptability to various tasks commissioned

Source: Kruger & Steenkamp (2008: 16)

5.4.3 Relationship between operation system type and layout type

Decisions concerning the layout type will not merely depend on choosing between the basic layout types, but also on understanding the advantages and disadvantages of the different types, or combinations, of layouts. The flow of transformed resources will be determined by both the feasibility and importance of the degree of regular flow. The opposite of this is high variety (when regular flow is difficult) and low volume (when regular flow is not feasible). The relationship between basic processes (or operations systems) and basic layout types are:

- projects and large jobs = fixed-position layout
- jobs and batch processes = process layout (layout according to similar processes)
- large batches and small continuous processes = cell layout
- mass processes or pure continuous repetitive processes = product layout (layout according to the product).

The layout of the productive unit, therefore, only governs the general configuration of facilities. Mode shifting is also possible after process re-engineering. This means the mode of operations system design (and layout type) may change from job to project, or from batch to continuous (from custom to commodity). The purpose of effective layout is to streamline workflow by minimising handling distance and increasing facility utilisation.

5.5 Operations planning and control

Planning is about who, what, when, how and where.

Definition

Operations planning is governed by OM policy, defined as a set of guidelines for execution and control, as based on the operations strategy. This determines the prescribed, accepted actions within the operations function in order to achieve continuity, consistency and integration.

The result is that the operations manager's decisions are focused and consistent with planning done by the business, and that the operations function contributes to the creation of a competitive base.

Long-term planning involves factors such as fixed-capacity planning (eg deciding on the location and layout of a factory) and product planning (which incorporates product development and aggregate forecasting). These activities have a strategic element and decisions flowing from them will affect the operations system in the long term.

Medium- to short-term planning involves factors such as aggregate or variable capacity planning, item forecasting, master scheduling, operations scheduling and inventory management. The activities of medium-term planning are based on the decisions taken during long-term planning, since these – to some extent – determine the parameters within which the medium-term planning will be done. Furthermore, the operations manager organises the operations function by allocating responsibilities and creating structures (eg arranging departments and sections, as well as setting up chains of authority). This function also includes the creation of supplier networks.

Leadership involves motivating the workers within the operations function. A new development in the field of operations management is the focus on the human aspects of the transformation process.

Finally, the operations manager is responsible for *control* over the transformation process. This function includes all the steps taken to set standards and to evaluate the operations system against these standards. Some of the control functions exercised by the operations manager include quantity control (the measurement of productivity), quality control and cost control.

Aggregate planning refers to the anticipation of aggregate demand in broad terms and encompasses capacity planning. It is a broad view of the market and what an operation can handle in capacity terms. Master scheduling follows aggregate planning and results in a master production schedule (MPS) statement as the main input to materials requirements planning (MRP).

5.5.1 The specific objectives of demand management and demand management activities

- **Long-term objectives:** The long-term objective of demand management relates to fixed capacity planning.
- **Medium-term objectives:** In the medium term, demand management is used to determine aggregate demand. Normally, this is the demand for a group of products sharing the same capacity in the plant. Aggregate demand is utilised for adjustable capacity planning.

Definition

Forecasting can be defined as determining the demand for a product produced by the business, but with a view to accommodating future events. Recording orders is another important component of demand management. The delivery promise can only be made once the order has been positioned in the master schedule, which in turn is dependent on the availability of finished product, assemblies and components.

5.5.2 Categories of forecasting

Broadly speaking, forecasting techniques are divided into three categories:

- First, there are *qualitative techniques* based mainly on judgement. Although data is used in these techniques, the forecast is made on the grounds of the forecaster's feelings about the data, rather than on actual calculations.
- The second category is known as *time-series analysis*, which is quantitative. In this category, the data is manipulated mathematically in order to arrive at a forecast of the subsequent period(s).
- The last category comprises the so-called *causal methods*. The purpose of these forecasting techniques is to determine a cause-and-effect relationship. This is usually done by means of a mathematical expression or model.

Multi-period pattern projections

The time-series technique produces forecasts for more than one future period (be it a week, a month or a quarter). For example, the average of a number of monthly data points can be taken and used as a forecast for the next six months. The basic assumption is that no trend or seasonal component is present in the demand pattern.

Single-period patternless projections

This kind of forecasting technique also makes use of historical data, but the forecast is for the next (single) period only. The historical data usually reflects the most recent demand quantities.

Capacity refers to the limited means of a productive unit to manufacture a certain quantity of products within a particular fixed period. OM may refer to capacity planning as planning for adjustable (variable) resources such as labour and aggregate inventory, over the medium term. It should also refer to fixed (non-adjustable) resources. Capacity control refers to the loading of resources and keeping work centres busy, but not overloaded.

Planning for future production capacity occurs in the following three stages:

1. Demand forecasting.
2. Attuning the capacity of various machines/resources/facilities.
3. Determining strategies for the full utilisation of capacity.

5.5.3 The 'Ms' of capacity

Business capacity is the greatest workload, or input, that a business can handle (transform into output). The 'Ms' are used to describe the limits of any operation, and consist of the following: methods, machines, money, material and manpower (including management). Capacity is made up of combinations of the Ms, and the optimisation of capacity is important to maximise production ability. Factors such as the learning curve have an impact on capacity. Trained and experienced manpower affects the rest of the capacity configuration in the sense that it determines how the other Ms are utilised.

5.5.4 Fixed-capacity planning

Fixed-capacity planning is the first long-term question facing OM. This planning must be done thoroughly in order to place the productive unit on a firm footing from the start. In this context, the term 'productive unit' means the factory, office, bank, shop or similar institution in which goods and/or services are manufactured or provided. The elements of fixed-capacity planning (Krüger & Steenkamp 2008: 100) are:

- occupational safety
- identifying a suitable location
- determining the size of the productive unit
- the layout of the productive unit
- the choice and design of, and specifications for, machinery and equipment.

5.5.5 Adapting capacity to a change in demand

To illustrate the strategies that can be followed to make full use of production capacity, let us look at an example. An operations unit consisting of a single experienced joiner can assemble 12 coffee tables per week. Demand increases to 20 tables. The business should, therefore, consider appointing another joiner. The productive unit can consider the following strategies if its capacity is too small to satisfy demand for the product:

- It could opt for *differentiation of product*.

- It could also consider increasing capacity by acquiring *additional fixed assets*.
- The business could introduce *overtime*.
- An *additional shift* could be introduced. This, too, is a relatively cheap alternative, because the fixed costs have already been covered.
- *Temporary means of production* can be used. This phenomenon is often found in the case of seasonal productive units, such as hotels, which employ additional staff during busy holiday periods.
- Divisions experiencing a shortage of capacity could generate that capacity by a *transfer of surplus capacity* from other divisions.
- *Specialisation* of product can be considered if there are too many types of products and/or services.
- Additional machines could be obtained.

To take another example, assume a sub-assembly of the 'BIRDIEZ' golf cart needs to move through three machines in the production process, as shown in Table 5.5:

Table 5.5: Example of an assembly process

Workstation	Machine	Capacity carts per day
Extrude	D	60
Weld	E	20
Paint	F	30

The machine with the smallest capacity (E) will limit the capacity of the entire process. Machine D has surplus capacity and more machines may be required (given that demand is higher than capacity). Calculate the smallest value into which each of the three capacity figures (60, 20 and 30) can be divided and determine how many additional machines are required (see Table 5.6 below). The smallest value works out to be 120.

Table 5.6: Additional processing capacity

Workstation	Machine	Calculation	Additional machines needed
Extrude	D	120/60 = 2	1
Weld	E	120/20 = 6	5
Paint	F	120/30 = 4	3

The productive unit can consider the following strategies if capacity is *greater* than demand:

- Workers can be *scaled down* or even phased out.
- The unit can *work fewer shifts*.
- *Integration of product* is an effective strategy at management's disposal.
- Management may decide to *close a section of the factory* and lay off some of the workers.
- The business can decide to *phase out the temporary means of production*.
- The business can move *surplus capacity* that was brought in from another department back to that department.

5.5.6 The activities of operations scheduling

Schedules are statements of volume and timing in different types of operations. Operations scheduling refers to the determination of the quantity of jobs and the sequence in which jobs and activities are to be completed in the manufacturing plant. The scheduling activity is one of the most complex functions of OM because of the following variables: schedulers must deal with different types of capacity/resources simultaneously; machines and staff will have different capabilities, and the number of possible schedules increases as the number of activities and processes increases.

Scheduling is a very important skill inherent to OM and is regarded as an art. Schedules change frequently and need to match demand and capacity on a continuous basis.

The aggregate plan for a business indicates what final products the business plans to manufacture. Dullstroom Trays, for example, primarily produces 400 trays per year, but also plans to manufacture 300 chairs and 55 coffee tables. The master production schedule (MPS) is a disaggregated plan and usually indicates the planned production per time interval (eg per month).

Important

The basic activity of scheduling is the pushing, pulling, routing, sizing and timing of work through work centres. Push and pull control refers to the system that triggers the work. MRP, for instance, pushes out the work without considering the exact time or use of the customer; whereas in a pull system, the pace is determined by the customer as the next process.

Operations scheduling comprises four distinct activities (Krüger & Steenkamp 2008: 108). Firstly, the operations must be *timed and routed*. Timing involves making a decision about when a particular operation will take place, and routing is done to establish the place where, or on which piece of equipment, the operation will be performed. The second activity is known as *dispatching*. This involves issuing a shop order so that the operation can take place. The third activity concerns *control* or establishing the status of the shop order. This is necessary, since the progress of the shop order must be known at all times. If necessary, a shop order may have to be expedited so as not to delay the delivery of the final product, or to minimise the lateness on an order. *Expediting* is the fourth activity of operations scheduling.

Effective scheduling:

- provides a realistic schedule and allows for any essential changes
- allows enough time for all the operations (the time before, during and after operations)
- does not release all available jobs by means of shop orders
- does not schedule all the available capacity of the plant
- assigns the responsibility for keeping to schedules, to the workers or operators.

Apart from the fact that scheduling is much easier in a continuous or repetitive manufacturing situation, the success of the so-called 'process operations' also depends on a number of other factors. These factors include the following:

- avoiding quality problems where possible and assuring the reliability of suppliers
- monitoring the process and product design
- rigorous preventive maintenance
- optimal mixes and rapid changeover
- regular schedules and linear output.

Undercapacity scheduling means that less than the total available capacity is scheduled, for example 95% of available capacity for a particular shift. This means that the required output for the shift is only 95% of what could be produced at full capacity.

The nature of scheduling will depend on the type of operations system (eg make-to-stock, resource-to-order or make-to-order). The planning and control will differ for each product or operation. Low-volume operations have more speculation because of the different variables in the throughput process. For high-volume make-to-stock operations the demand time is very short compared with the total throughput cycle.

5.5.7 Forward and backward scheduling

The point of departure used in scheduling has a critical influence on the scheduling itself. The first approach is to begin at the present and to schedule forward, according to the times needed to finish all the operations necessary to complete the order. When all the times have been added, the manufacturer can give the customer an indication of when the order will be ready. This approach is known as *forward scheduling*.

On the other hand, in *backward scheduling* the required time as prescribed by the customer can be used as a starting point so that the time for each activity is subtracted from the due date (see question 13 in the Questions for self-evaluation in this chapter).

5.5.8 Gantt charts and other techniques

Gantt charts (time charts) are the most commonly used scheduling technique. They are simple to construct and easy to understand. Gantt charts give a *visual* impression of the progress made on the project or subproject. The work packages of the job/project, with its work package descriptors (tasks or activities), are shown on the left-hand side and the work duration at the bottom.

Another technique that can be applied to schedule any number of jobs on two or three machines is known as *Johnson's algorithm* (Pycraft et al 2010: 286–287). The algorithm ensures that the optimal sequence is found; that is, the sequence which will minimise the total processing time. Johnson's algorithm has as its point of departure the existence of a fixed sequence according to which the job moves through the work centres or machines.

The very simple Johnson's algorithm is a good example of how powerful an OM technique can be. This algorithm is widely used in small-job shops, where volume is low and variety is high. Determining the *optimal processing sequence* (that is, which job follows which), as opposed to scheduling work on a random 'thumb-suck' or first-come-first-served basis, can save operations managers a great deal of time and other resources.

In the following example of a plastics factory, jobs are extruded, then printed and finally cut.

Table 5.7: Plastic extrusion operation of five different jobs and three work centres

Trapsix (Pty) Ltd to jobs	Processing time in the extrusion work centre ⟶	Processing time in the printing work centre ⟶	Processing time in the cutting work centre ⟶
P	6	5	5
Q	8	3	7
R	4	2	7
S	3	2	10
T	5	5	8

Source: Pycraft et al (2010: 286–287); Author's own data

Following the steps of the algorithm (not explained here), the optimal sequence is: S R P Q T, with a *total processing time* (determined on a Gantt chart) of 41 hours. Trapsix (Pty) Ltd can, in this way, optimise their *time per job* and gain additional capacity. If the sequence is randomly determined by 'thumb-suck', it will be found that there is an *error margin* of six to ten hours. A manager, therefore, who plans to do five jobs on this thumb-suck basis in a 42-hour week, will not succeed; in fact, the P, Q, R, S, T sequence will take 49 hours. Managers who do not use this technique will tend to lose up to 10 hours per week × 40 booked work weeks = 400 hours ÷ eight-hour working days = ±50 days.

Applying this simple algorithm can save a considerable amount of time, thus creating spare capacity.

5.5.9 Inventory management

Inventory management is the function of planning and controlling all types of inventory (raw materials, sub-assemblies, consumables, finished products, etc). Inventory management is crucial, since capital should be tied up in other investments and not in idle stock. The inventory function has several interfaces with purchasing, warehousing, marketing and OM.

The essence of inventory management is to have just enough inventory at any given time. This implies two major dimensions, namely, *timing* of inventory and *quantity determination*. Several techniques exist for timing and quantity determination.

The mode of operation will determine the type of timing and quantity planning and control. Resource-to-order (project operations) will keep no stock. Make-to-order (eg job shops) will hold the minimum inventory and will obtain inventory according to the custom order by the client. Make-to-stock (eg batch and repetitive operations) will do planning and control based on forecasting, safety stock levels and economic order quantities.

Control must be exercised over the financial investment in inventory thereby saving on interest and cost. Keeping inventory goes hand in hand with certain cost factors such as obsolescence, interest on capital investment, physical wear and tear, damages, transportation and insurance. If inventory control does not enjoy management's full attention, these cost factors can take on serious proportions.

The objectives of inventory management are as follows:

- A scientific, factual method to simplify purchases (by using mathematical models) needs to be created.
- There should be a reduction in possible losses as a result of obsolescence and incorrect or excessive purchases. Good inventory control turnover rates are necessary.
- Dead or slow-moving stock should be identified.
- Inventory control must serve as a source of information for management decisions.
- Losses should be prevented by controlling all incoming inventory as regards quality, quantity and the requirements as determined in the purchase order. This is important since it impacts directly on the quality of the finished product.
- Excessive variety should be avoided. The advantages of standardisation and simplification must be considered.
- Production should never be delayed because of a shortage of a certain inventory item. Such delays make an extremely bad impression on the customer.
- Ordering the most economical quantities through an effective control system is essential.
- All internal customers (the next process) and external customers should be given good service.

Carrying cost

Inventory ties up capital and is referred to as 'carrying cost' (Schonberger & Knod 2001: 351). There are several inventory carrying cost elements. Total carrying cost usually includes the following, and may be direct or indirect:

- **Direct inventory carrying cost elements:** the two direct-cost components are capital cost (interest or opportunity cost) and holding cost. Holding cost refers to the cost involved in renting storage facilities, warehouse equipment, electricity, insurance, security, handling, bookkeeping, warehousing labour, and damage.

Note: in the activity below, I = the annual carrying cost rate, which is based on the direct inventory carrying cost elements, namely, capital cost and holding cost.

- **Indirect inventory carrying cost elements:** these are the costs attached to obsolescence, record-keeping, physical stocktaking, inventory planning and control by management. Other hidden cost elements are the cost of production floor space utilised for work in process, scrap and rework, as well as the cost involved in handling and containerisation.

Activity

The entrepreneurs producing custom-made hearing protection devices in South Africa need to be flexible and adaptable to the high demand for quality earplugs. Assume it would cost R2 750 to rearrange the Noise Clipper (Pty) Ltd laboratory facilities inside one of their work centres in order to eliminate R5 500 worth of inventory. If I = 0.25, will the rearrangement be worth it?

This is a saving of 0.25 x R5 500 per year (ie R1 375 per year), which means that the R2 750 will be recovered within two years. Hence, this rearrangement would be worth considering.

Order cost

Definition

Order cost can be defined as the cost which must be incurred to place an order. An item may be ordered twice, three times or more per year – or even daily in JIT systems. If orders are placed only twice a year, such orders will make up 50% of the annual demand. If these orders are to be manufactured internally, the cost will consist mainly of machinery set-ups.

Inventory timing by means of the reorder point (ROP)

Inventory timing by means of the ROP can be regarded as the traditional model. This technique is as old as manufacturing itself. However, it is still a popular method and is found, for example, in every household. A reorder point refers to a certain level of stocks at which the stock must be replenished, or reordered.

There are variations of ROP. *The periodic inventory system* is used by restaurants, service stations and other retailers, where inventory is ordered daily or weekly. The *two-bin system* is also a continuous inventory system often used in small warehouses. As soon as one bin is empty, an order is placed.

ROPs are calculated according to experience of consumer patterns, rule-of-thumb judgement, or by applying a formula. However, the formula also demands a degree of judgement, since it incorporates safety stock and demand patterns.

The ROP formula is:

$$ROP = D(LT) + SS$$

where

ROP	*= reorder point*
D	*= average demand per time period*
LT	*= average lead time*
D(LT)	*= average demand during lead time*
SS	*= safety stock*

Activity

The Noise Clipper laboratory's average monthly demand for MR.EAR cleaning spray for occupational hygiene is 105 litres. If the order lead time is one week and a safety stock of five litres is applicable, what will the ROP be?

ROP = D(LT) + SS, in other words

ROP = 105(7/30) + (105/30)5

= 24.5 + 17.5

= 42 litres of MR.EAR cleaning spray (this level signals a new order)

5.5.10 Material requirements planning

Material requirements planning (MRP) plans for various periods in the future, and is also referred to as a 'push system'. MRP can be complicated and is computer-based. An MRP computer run enables operations managers to answer questions such as the following: a master schedule for three sizes of screwdriver indicates that all three screwdrivers (sizes 2 mm, 7 mm and 5 cm) use the same handle. The item master file shows the planning factors, such as batch order quantities of 20, a safety stock level of two handles, available inventory of 70 and the lead time for orders of two weeks. In this way, MRP assists OM managers to establish when orders will be issued and what the planned orders will be.

5.5.11 Determining inventory quantities

The lot-for-lot approach

The easiest way is to make the batch size equal to net requirements. Only the quantity required for the parent item is bought or manufactured. There is no batching into larger batches. Orders must be placed frequently, which results in high order costs or set-up costs.

The EOQ formula

The economic ordering quantity (EOQ) model is one of the oldest, having been developed by F.W. Harris in 1915. Although the assumptions are not always applicable in practice, they are still usually close enough to make the model useful. EOQ is explained in Chapter 6.

5.5.12 Break-even analysis

This is a technique for determining the volume at which total revenues are equal to total cost, or when the cost to make equals the total cost to buy. One can use this in a make-or-buy decision, or when two production methods are compared. It may also be used to determine the profit potential of a new product.

Activity

The Fairy Dale Hospital in Buffalo Bay, Knysna, considers a new procedure to be offered at R200 per patient. The fixed cost (portion of the total cost that remains constant regardless of changes in levels of output) is R100 000 per year. The variable cost (the portion of the total cost that varies directly with volume of output) is R100 per patient. What is the break-even quantity for this service?

One can use the algebraic or graphic approaches. For the hospital to break even, the number of patients (Q) in Buffalo Bay must equal the fixed cost per year (F) divided by the unit profit margin (price (P) minus cost (C)). This gives us the following formula for the break-even number of patients:

$$Q = \frac{F}{P - C} = \frac{100\ 000}{200 - 100} = 1\ 000 \text{ patients}$$

Consequently if demand is less than 1 000 patients, the procedure should not be considered.

Activity

Break-even case study using the algebraic approach

Noise Clipper (Pty) Ltd has developed and patented a new cleaning device for hearing protectors. Before trying to commercialise the device and add it to their existing product line, they wish to get an idea of possible success by determining the minimum break-even demand or volume. The fixed cost is R56 000 per year, the variable cost per unit is R7, and the selling price is set at R25. Expected initial demand is ±415 units per month. Use the formula to calculate the break-even quantity (Q).

The answer is Q = 3 111 units per year. It will, therefore, be worthwhile to proceed with the manufacture of the device.

5.6 Operations improvement and total quality management

Leadership is an important part of quality. True entrepreneurs have an innate passion for quality and they lead by their own example and influential power. However, they do need to take cognisance of a few important issues, namely:

- effective and constant communication
- creating the right attitude and motivation for employees to serve the customers to the best of their ability
- identifying and developing the abilities of employees so that they can contribute in the areas in which they are operationally active
- helping employees to understand the basics of sound management.

Definition

A good ***leader*** has the ability to see the big picture, to strengthen the vision and then inspire employees to strive for its realisation. Leaders have a big impact on the culture of the business. Leadership hinges on vision, strategy and people empowerment. Management by fear is a sign of leadership inadequacy.

Leadership determines the components of the quality culture. These intangible components are as follows:

- behaviour
- norms
- dominant values
- rules of the game for getting on
- climate.

5.6.1 Never-ending improvement through total quality management

A total, or holistic approach to quality refers to quality at the source in terms of all resources. The three main reasons why total quality management (TQM) is so popular and widely adopted by OM managers are; firstly, buy-in by employees because it is intuitively attractive to overcome imperfection; secondly, the principles of TQM make sense unconventionally; and thirdly, a TQM approach to management can dramatically increase operational effectiveness which is at the heart and essence of any organisation. TQM is primarily internally focused for operational excellence (Oakland 2014) and is therefore concerned with the improvement of all aspects of operations performance.

The TQM approach is far more than quality assurance (QA) or the detection mode of quality control. It is an approach to improving the 'smartness', competitiveness, flexibility and effectiveness of the entire business. It also removes the burden of wasted effort from people's lives by bringing everyone into the processes of improvement so that results are achieved in less time (Oakland 2003).

Total quality management is a holistic approach to quality

Quality is a need of both the internal customer (the business and the operation) and the external customer. Quality matters to external customers because they want:

- to be respected and do not want any hassles
- a product/service that offers value for money
- a product/service that is reliable and meets all their requirements
- a product/service that is available on time
- a product/service that improves their quality of life.

The main reason and justification for quality is the fact that it is often absent in people's lives, and so we consequently seek measures to restore it. One way to obtain quality is by closing quality gaps and applying TQM. Quality management is not only relevant in business, but also in the following seven areas:

1. quality of product
2. quality of service
3. quality of organisation
4. quality of processes
5. quality of work-life
6. quality of life
7. quality of being.

Quality of product can be defined as follows:

- conformance to the purchase order
- fitness for the intended function
- the degree to which the client or customer is satisfied
- a total composite of product and service dimensions that meets the customer's expectations.

Holistic quality refers to a product or service condition with multiple quality characteristics; one that is also managed, obtained or realised in a holistic way, namely, by TQM.

Holistic quality:

- is not only a beautiful product
- does not only happen on the production floor
- is not merely inspection
- is not only about improvement techniques
- does not only prevent injuries/errors.

The word 'total' in the term 'total quality management' refers to quality's roots and its end. Quality cannot, therefore, be left to chance. It has to be managed and this becomes everybody's responsibility, not just that of the so-called quality department.

Observe the following examples of definitions of TQM:

- TQM comprises actions needed to obtain world-class quality.
- TQM is the business-wide prevention of wastage, defects and injuries and its continuous improvement of quality.
- TQM is a comprehensive, uninterrupted programme to ensure quality throughout the business by placing the responsibility for it at source.

The overview of what quality is shows us that it is not easy to define and that it is often in the eye of the beholder. What do people look for when they consider the quality of a product or service? The best way to answer this is to use different quality dimensions.

Examples of quality dimensions pertaining to services are as follows:

- **Reliability** means that one can depend on a service dimension as expected.
- **Responsiveness** is the willingness of the service provider to meet the customer's needs when these needs are expressed.
- **Competence** refers to the service provider's possession of skills and knowledge to perform the service.

The following attributes relate specifically to goods:

- **Performance** is the way that a product actually operates. Does it do what it promises to do?
- **Features** are the little extras that go with a product and make it unique.
- **Reliability** refers to the promise that it will perform and keep on performing as promised over a specific time span (eg the guarantee period).
- **Conformance** is the meeting of preset standards.
- **Durability** is the length of the useful life of the product – its lifespan.
- **Aesthetics** relates to the physical quality of the product, which means it is pleasant to look at.
- **Perceived quality** is the indirect evaluation of quality, for example the reputation of a specific brand.

5.6.2 Maintenance and replacement

Machinery and equipment are subject to a substantial degree of wear because their moving parts are in constant use. Machinery and equipment operating in dusty conditions are inclined to wear more quickly and to require more maintenance.

The consequences of defective machinery and equipment are:

- **Reduced production capacity.** Machinery and equipment failures mean that no production can take place, and this leads to a reduction in capacity.
- **Increased production costs.** Failures in machinery and equipment result in a higher hourly cost. Machine operators are idle while the machinery and equipment are being repaired; moreover, the salaries and wages of the maintenance teams, as well as the cost of replacing the broken components, have to be discounted. Sometimes, backup machinery must be hired or purchased, which also means extra cost.
- **Lower-quality products and services.**
- **Threats to safety.**
- **Customer dissatisfaction.**

Mixed maintenance strategies are adopted according to circumstances. Usually they are a combination of breakdown, condition-based and preventive maintenance. These types may also be categorised as follows:

- corrective maintenance
- preventive maintenance
- centralised maintenance
- decentralised maintenance
- sub-contracted maintenance.

5.6.3 Preventive maintenance

The following programme can be instituted to ensure effective preventive maintenance:

- **Training of maintenance teams.** The members of the maintenance teams must be properly trained so that any possible failure can be dealt with effectively.
- **Determining/predicting the possible time of failure.** The possible time of failure of the machinery and equipment should be scientifically determined. Proper records must be kept of the intervals between failures of the relevant components so that their average lifespan can be calculated.
- **Implementing Japanese principles.** The Japanese preventive maintenance programmes are based on the principle that workers accept responsibility for preventing possible failures.

The business must, at all times, try to minimise the maintenance cost. This can only be done by creating a proper balance between corrective maintenance and preventive maintenance.

Preventive maintenance becomes more expensive than corrective maintenance as the amount of maintenance increases. Preventive maintenance can, therefore, only be justified if either of the following two conditions occurs:

1. when the possible machine failure can be predicted with a fair measure of accuracy, so that the machine can be repaired before it fails
2. when the time spent on preventive maintenance is less than it would take to repair a machine which has already failed.

5.6.4 Total productive maintenance and improvement

Maintenance should never be seen as an isolated activity. It is part of a continuous improvement programme, since maintenance should lead to improvements. Maintenance strategy should be seen as part of TQM and total productive maintenance as well as a mechanism to identify improvement opportunities.

Important

The objective of total productive maintenance (TPM) is to maximise plant and equipment effectiveness, to create a sense of ownership for operators and to promote continuous improvement through small-group activities involving production, engineering and maintenance personnel.

This drive to maintain and sustain assets, equipment and resources has many hidden advantages. Besides improved operations, it cultivates pride and leads to other smaller initiatives (eg new methods and process technologies). Maintenance should never be only corrective or reactive. Improvements should be sought to minimise reactive and corrective maintenance. Preventive maintenance (as part of TPM) must always be improved and made part of all maintenance strategies within the business.

5.6.5 Safety, health and environment management

OM is not only a quantitative subject, but also has a humanitarian side, since many operational solutions lie in employee motivation and well-being.

Unfortunately, many entrepreneurs are more concerned about getting the business going initially than worrying about health and safety. This can be detrimental: even large mining businesses tend to neglect health and safety.

Today, the role of OM is definitely moving increasingly towards safety, health and environment (SHE) management. A case in point is the new focus on the well-being of the 'internal customer'. Workplace health promotion is a strategic issue. The changing role of operations managers includes a new paradigm towards labour and work. Their challenge to create and sustain a workplace of health and safety excellence is increasing, and there is a culture shift towards the philosophy of work and productivity within a SHE culture. Total quality management (TQM) is regarded as the vehicle to obtain organisational and business excellence. Everyone should enjoy work, and everyone can be a champion. A few quality principles can make a large difference, and a small positive change anywhere can have a positive effect everywhere.

5.6.6 Process technology improves health and safety

Any device that improves ergonomics or that can assist the value-adding process may be regarded as process technology. Besides robots, mobile phones and fax machines, a wide variety of technology is available to fulfil operational objectives. Small things such as a scanner, machine tools and personal protective equipment can make a huge difference. The filtering of harmful amplitudes of noise by means of hearing protection devices not only protects hearing, but also improves localisation, comfort, speech discrimination, and so forth.

The concern for health and safety should be informed by the conviction that safety is a matter of life and death. The sum total of all contributions (systems, strategies and behaviours) determines safety. This holistic view of safety is important, and should come from an internal sense of moral obligation rooted in values, and not only be driven by regulatory pressures. The majority (80%) of injuries at work are attributable to the unsafe acts of people, while unsafe conditions account for the rest of injuries.

5.6.7 Good housekeeping

Good housekeeping helps prevent incidents, just as cleanliness helps cut down on germs. A clean, orderly workplace will help workers in many instances. It helps to make workplaces more pleasant, makes workers feel better about their work, and prevents accidents. Treating a work area with respect will help avoid slips, trips, falls and bumps.

The following basic principles are part of good housekeeping:

- Wipe up accidental spills without delay.
- Stack materials (and other means) neatly.
- Keep cabinet doors and drawers closed.
- Return equipment and tools to their proper place after use.
- Dispose of waste or trash promptly (including flammable liquids, oily and paint-covered rags and paper).

5.7 Summary

This chapter has introduced the comprehensive OM body of knowledge. The dynamics of OM and the inherent importance of creativity introduced the chapter and the typical OM principles were listed. OM and process management were defined and the OM performance objectives discussed. It has been shown how productivity relates to OM and Section 5.4 dealt with operations strategy and design. This was followed by operations planning and control. Operations improvement covered the popular themes of quality, TQM and SHE management.

Questions for self-evaluation

1. What are the five major functions of operations management?
2. Which alternative is correct? Production/operations management:
    a. Deals with the general management tasks of the activities within a business, whereby inputs, such as raw materials and labour, are transformed into physical products.
    b. Refers to the 'technical part' of the business, where outputs are transformed into products and services.

   c. Primarily focuses on the transformation of outputs, like raw materials and capital.
   d. Is a new development in the business world which is of vital importance to finance new products.
3. Indicate the type of operations system and its associated layout type for:
   a. Flow production (continuous or repetitive operation)
   b. Batch production
   c. Job production
4. Which two of the following enterprises make use of a job system?
   a. A hairdresser
   b. A toy manufacturer
   c. An insurance broker
   d. A railway construction business
      1. a and b
      2. b and c
      3. a and c
      4. c and d
5. Which one of the following enterprises uses a product layout?
   a. A butcher
   b. A building contractor
   c. A TV repair workshop
   d. An electricity supplier
6. Modern society is becoming more sophisticated. Complete the following table to indicate the basic differences between lean and agile operation for customers demanding low cost (lean supply) and customers demanding availability (agile supply).

Table 5.8: Basic differences between lean and agile operation

Distinguishing attributes	Lean supply	Agile supply
Product variety and life cycle	low variety and long life cycles	
Forecasting mechanism		
Profit margin	low	
Market		volatile
Stock demand	stable long-term	

7. Indicate the basic layout types associated with each of the following processes:
    a. Projects and large jobs =
    b. Jobs and batch processes =
    c. Large batches and small continuous processes =
    d. Mass processes or pure continuous repetitive processes =
8. Which one of the following service enterprises uses a fixed position layout?
    a. A cinema
    b. A golf course
    c. A car-wash plant
    d. A pool repair business
9. Planning for future production capacity is done in the following three stages:
    a. Demand forecasting
    b. Attuning the ....
    c. Determining strategies for ....
10. The monthly forecast and actual sales of Shoeshine Ltd are given in the table below. What is the approximate sales forecast for October based on a three-month moving average?

Table 5.9: Forecast and actual sales for Shoeshine Ltd

Month	Sales forecast (Units)	Actual sales
January	211	200
February	183	195
March	156	140
April	175	135
May	157	185
June	153	190
July	170	220
August	198	235
September	215	200

11. The five elements of fixed capacity planning are:
    - ....
    - identifying a suitable location
    - determining the size of the ....
    - the layout of the ....
    - the choice and design of ....

12. ROPs are calculated according to experience of consumer patterns, judgement or by means of a formula. The ROP formula is:

$$ROP = D(LT) + SS$$

Determine the ROP if average monthly demand for MR.EAR cleaning spray is 105 litres. If the order lead time is one week and a safety stock of five litres is applicable, what will the ROP be?

13. Litho have five jobs to be scheduled and processed by a particular work centre. The processing time, date received and due date for each job are given. Today is day 66 on the production calendar. By using some scheduling or priority rules, indicate the task (job number) to be completed first for the situation shown in Table 5.10:

Table 5.10: Processing times, date received and due dates

Job number	Processing time	Date received	Due date
367	3	58	67
356	5	55	70
370	4	61	71
366	6	57	69
375	2	63	68

Indicate the task to be completed first when the following rules apply:

a. The earliest due date first

b. Most difficult task

c. First-in-first-out

d. Shortest processing time

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The purchasing function

6

CHAPTER

Learning outcomes

After studying this chapter, you should be able to:

- explain the role and importance of the purchasing function in a business
- explain the interdependence between purchasing planning, business planning and the planning of other business functions
- explain the centralisation/decentralisation issue of purchasing in a business
- explain the performance evaluation of the purchasing function
- illustrate and explain the procedure that is followed in businesses for most purchasing transactions
- explain quality issues with the purchasing of materials and services
- explain the issue of purchasing quantities and the control of inventories in a business
- explain the selection process and the factors influencing the selection of suppliers
- briefly explain purchasing prices as part of the total value package and the principal methods of determining prices
- briefly explain the internal and external factors influencing the timing of purchases.

6.1 Introduction

Consumers need to make small purchases on a daily basis, such as food and clothing, to satisfy their normal living needs, and less frequently they make large purchases such as a car or a security system to meet their long-term needs. Similarly, businesses also need to make small, regular purchases for their normal day-to-day operations (eg materials to manufacture a product, or finished products to sell in a shop), and from time to time they make irregular, more costly purchases, such as machinery, tools, computers, equipment, shelving and delivery vehicles. The purchasing staff in a business is responsible for purchasing the requirements to satisfy these daily and long-term needs.

When thinking about purchasing, one tends to think only of material items. However, just as a consumer needs to purchase services from, for example, medical specialists, plumbers, lawyers, banks, security firms and auto mechanics, businesses similarly need to buy services, which can include personnel recruitment, bookkeeping, auditing and cleaning. Purchasing services is also part of the purchasing staff's responsibility.

Example

In a security gate manufacturing business the purchasing function is responsible for purchasing various gauges of iron rod, locks, paint, welding equipment, cleaning services and stationery.

In a ladies' clothing boutique the purchasing function is responsible for purchasing the garments, fashion jewellery, purses, scarves and shop equipment (such as chairs, tables, display cabinets and shelves), refreshments, credit control and security services.

Definition

Traditionally, the objectives of the ***purchasing function*** are to buy materials of the right quality, in the right quantity, from the right source, delivered to the right place, at the right time and at the right price.

However, finding all the 'rights' can pose problems for businesses and challenge the purchasing function. The main activities of the purchasing function are derived from the objectives of the purchasing function. The purchasing activities are to:

- select suppliers
- arrange and purchase transportation services for incoming materials
- decide on the acceptability of purchasing prices and negotiate them
- determine the quantity of each material, product or service to be purchased
- determine the acceptability of the quality of the material, product or service
- expedite delivery of materials, products or services
- control inventory.

In this chapter, particular attention will be paid to these important purchasing activities.

6.2 The importance of the purchasing function

Purchasing costs are the largest expense for most businesses, particularly for retail shops such as a boutique, a liquor store or a hardware shop. In other words, the purchasing function spends most of the money of the business. Therefore, performing the purchasing function well has a profound influence on the profit of a business. Due to the importance of the purchasing function and its potential impact on the profit and sustainability of a small business, the owner should take responsibility for purchasing or closely control this function.

The impact of the purchasing function differs from one type of business to the next. In retail businesses, up to 90% of each rand coming into a business and available to a business is spent on purchases. In manufacturing firms, the share of spending on purchasing is 60% of each rand. The high proportion spent on purchasing in the case of retailers is the result of the fact that little value is added to the final product by the firm, because finished goods are purchased and resold in the same form to the customers. Figure 6.1 shows the financial impact of purchasing expenses in a number of types of business.

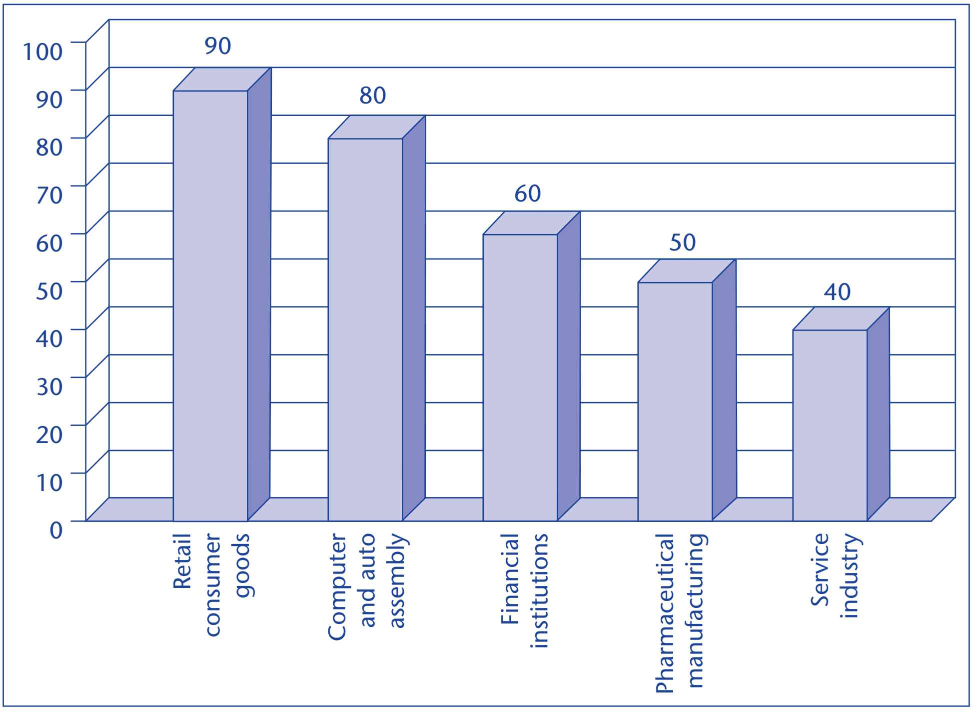

Figure 6.1: The share of purchasing cost of each rand in various types of business

Source: Adapted from Van Weele (2010: 12–13)

It is clear that savings on purchasing costs (part of total expenses), can make a vital contribution to a business's performance, if one accepts that profit is the favourable difference between income and expenditure:

Income – Expenses = Profit

If the purchasing function succeeds in attaining the purchasing objectives of the 'right quantity, quality and time' a business will receive the required amount of material when it is needed for manufacturing or for the customers of a shop. This is known as the 'just-in-time' principle. If this is the case, then businesses do not have to carry large inventories (also known as stock). If too much material is purchased, too much money is tied up in inventory and a business can experience cash flow problems. In addition, there are costs involved in keeping inventories, such as insurance, risks (such as obsolescence and theft), warehousing costs and interest on loans. Efficient purchasing can, therefore, improve the business's financial position regarding inventory holding.

The purchasing function also contributes to the successful marketing of the business's products. By purchasing materials of the right quality and price at the right time, a manufacturer can make final products available in the right quantities, at a competitive price, at the right time, to its clients or market.

By comparison, a retail buyer has a greater and more direct influence on the marketing of merchandise (for example, clothing or household products), because the availability of the right product (type, quality, style and brand), at the right time and in the right quantities are important considerations in successful marketing in retail. Efficient purchasing can thus facilitate the marketing of a business's products, and contribute indirectly to profits through the marketing function.

Example

In a retail store such as Edgars, which caters for the whole family, the purchasers must plan their seasonal purchases in advance to ensure availability when marketing campaigns start. For example, during the winter months, purchasers will be busy buying clothing for year-end functions and holidays. These items must be available early in October, when people start preparing for those occasions. Fashionable and classic evening wear in moderate amounts and of moderate quality will be purchased for younger and more traditional customers. At the same time large stocks of casual fashion and swimwear (in the same price and quality range) will be purchased, in preparation for the long holiday season. If the correct merchandise is purchased, at the right time, in the correct quantity and at prices and quality that are acceptable to the customers, the turnover of the firm will increase dramatically. If one or more of the elements of time, quality, quantity and price are not acceptable to the customers, they will make their purchases elsewhere, resulting in losses to the firm.

6.3 Management of the purchasing function

The general management tasks of planning, organising, directing and control have already been covered in this book. Businesses and business functions such as marketing, human resources, finances, operations and purchasing, all need to be managed. In this section, a brief overview of the management of the purchasing function will be provided.

6.3.1 Planning in the purchasing function

Purchasing is a service function in a business and should therefore support the overall business planning. The setting of purchasing objectives (as part of the planning task) should help realise business objectives.

Example

If a family clothing business decides on its future strategy and sets objectives, the purchasing function also has to set objectives to support these objectives. Table 6.1 shows these objectives.

Table 6.1: Business and purchasing objectives

Business objectives	Purchasing objectives
To retain the market share	To continue seeking new items that will satisfy ever-changing market preferences and fashions
To move from a speciality market (eg casual clothes only) to a general market (including formal clothes, underwear and household linens)	To seek new suppliers To develop a more efficient materials flow system to handle the greater variety of items, while keeping total inventory volume as low as possible
To develop specific new products (such as private brand items)	To seek suppliers who will be willing to supply quality private brand merchandise
To initiate cost-reduction plans	To standardise merchandising lines to the more popular, or profitable, ones and to reduce the number of suppliers

Purchasing planning should also be conducted in consultation with the other functional areas because the plans of the marketing, operations and financial functions affect the planning of the purchasing function. The marketing function plans according to seasons and customer demand. The purchasing function must plan accordingly to ensure that the materials or products are available when the marketing function stimulates customer demand through marketing efforts, such as advertising.

Example

In a nursery and garden shop in Gauteng, the marketing function plans to stimulate customer demand during September for seedlings, seed, grass, shrubs, gardening tools and garden furniture for the new spring/summer season. The purchasing function must ensure that by September, all of these items will be in stock in the right quantities. This means that the finance function must make sure that the necessary funds are available for the purchasing function to start ordering during July, or earlier, in the case of custom-made or imported items. During the high season, the purchasing function has to reorder continuously to replenish the stock. Before the winter season (April/May), marketing would start promoting outdoor heaters, flower bulbs, fertiliser, solar panels, indoor plants, pots, etc. The purchasing function must plan accordingly.

The purchasing function will use the purchasing budget as a planning tool. The purchasing budget should be synchronised with the marketing, financial and operations budgets.

6.3.2 Organisation of the purchasing function

As already indicated in previous chapters, the organisation of a business consists of allocating responsibility and structuring activities. In small- and medium-sized businesses, the purchasing of important items will most probably be performed by the entrepreneur, while less important items, such as cleaning materials and refreshments, would be purchased by one of the clerks.

In larger businesses, however, with various branches or plants, the decision must be made as to where and by whom the purchasing function is performed. This is the crux of the ‘centralised/decentralised’ issue that has been challenging large businesses, organisations, business consultants and academics worldwide for many decades.

In a business with a *centralised* purchasing function, purchasing is done at one place by the purchasing manager and the personnel responsible for purchasing. In a business with a *decentralised* purchasing function, each business unit, branch or plant performs its own purchasing. However, there is a third option, namely a *combination of centralised and decentralised functions*, whereby some materials, products and services are bought on a centralised basis and others on a decentralised basis.

A centralised purchasing function has certain advantages, one of them being the standardisation of purchased materials. Standardisation has cost advantages. A greater volume of materials of one kind purchased from a supplier results in lower prices, better supplier relations and delivery schedules for volume orders. Centralised purchasing is especially suitable if the needs of business units are much the same, for example the outlets of a chain of supermarkets. If the greatest proportion of the purchases of a business is made from a single supplier or a few suppliers, and if the materials or products are of strategic importance for the operation of the business's activities (for example, national brand grocery items in supermarkets), it is preferable to purchase on a centralised basis.

Decentralised purchasing, on the other hand, is particularly suited to businesses that are geographically dispersed, and whose purchases are made from a number of local suppliers. If a firm's plants perform different activities (for example, Sasol's petrochemical manufacturing, coal mining and fertiliser manufacturing) and consequently have unique needs in terms of supplies, then decentralisation is the obvious choice.

Decentralisation has the advantage that purchasers have closer contact with customers (internal users of purchased items and external clients) and with local suppliers, and reaction time to the customers' demands is quicker.

A combination of centralisation and decentralisation is a useful middle course. In this structure, the centralised purchasing function purchases collective (common) requirements, enters into long-term contracts on behalf of the whole business, purchases capital equipment, formulates purchasing and supply policy and strategies, trains purchasers and evaluates the performance of decentralised purchasing. Meanwhile, the decentralised purchasing function provides for the special needs and small purchases of the regional plant or branch. The purchasers report directly to the plant/branch manager, but operate within the parameters of policy laid down by the centralised purchasing authority.

Example

In a large business like Telkom, the head office will negotiate large contracts with suppliers of copper cables, optic fibre, microwave dishes, telephone equipment, poles and computer systems. The regional and local offices will purchase non-strategic items, such as tools, maintenance materials and services from local suppliers, within the policy guidelines provided by the head office.

6.3.3 Control in the purchasing function

As previously explained, control is a management task to determine whether the business and the different functions within it, such as purchasing, have attained their objectives and improved their performance. Control may be done by means of performance evaluation. Control of the purchasing function in a large business will be executed on two levels; at management level and at purchasing activity level. Control in smaller businesses will mainly be carried out at the purchasing activity level.

Determining the performance on the purchasing management level is difficult because 'management' is intangible. This evaluation will thus be subjective. The following are examples of questions that will be included in the evaluation of purchasing management:

- Are purchasing policies, procedures and practices up to date, documented and effective?
- Does the purchasing manager have adequate knowledge and skills to lead the purchasing function in an increasingly complex purchasing environment?
- Is a programme in place for the development of purchasing and supply personnel, including training plans and procedures?
- How are the relationships between the purchasing function, suppliers and other functions in the business, as well as the cooperation and interactions amongst them?
- How do suppliers feel about the purchasing and supply function?
- Are there adequate performance appraisal and control systems in the purchasing function?

As mentioned earlier, the aim of the purchasing function is to supply the business in the most efficient way with the right materials of the desired quality, at the right place and time, in the right quantities and at the right price. To realise this objective, the purchasing function has to perform certain activities. Control is necessary to ascertain whether these activities are being performed effectively. In a small business, control on this level will most probably be performed by the senior manager.

The following are examples of criteria or control points, also known as *key performance indicators* (KPIs), which can be used to gauge the efficiency of the purchasing activities:

- **Price:** By comparing actual prices with market prices and the number and value of discounts negotiated for a certain period.

- **Supplier performance:** By determining the number of rejected orders, orders received late and the number of times it was necessary to expedite orders.
- **Timeliness:** By determining the number of orders indicated as urgent, the number of interruptions of operations and the number of purchases lost from being out of stock.
- **Cost savings:** By, for example, comparing costs with those of previous periods and expressing administrative purchasing costs as a percentage of the monetary value of purchases.
- **Inventory holding:** By calculating inventory turnover, inventory losses and obsolescence of stock.
- **Relationship performance with suppliers:** By means of a supplier survey or scrutiny of supplier turnover.
- **Relationship with other functions in the business:** By monitoring the diligent execution of requests to the purchasing function.
- **Workload:** By, for example, looking at the number of orders and requisitions.

The outcome of the above evaluation can be compared with the past performance of the business, to other business units (branches), or to other businesses. This comparison of performance is also called 'benchmarking'.

6.3.4 Purchasing management summarised

As with all business functions, the purchasing function must be managed. The purchasing function must plan and set objectives (for a certain period) in line with, and in support of, the strategic and tactical objectives of the business. Purchasing planning must also be done in cooperation with other business functions, such as marketing, operations and finance. The purchasing function can be performed on different levels and in different places in a business. Finding the right organisational position for performing the purchasing function is particularly challenging. The performance of the purchasing function must also be monitored to determine how efficiently it is being executed.

In the next section, the execution of the purchasing activities, as reflected in the purchasing aims 'the right materials of the right quality, in the right quantity, at the right time, from the right supplier' will be discussed.

6.4 Purchasing activities

Purchasing activities are executed in logical steps, forming a cycle also known as the 'elements of the purchasing processes' or 'purchasing procedure'. Some of the activities are interdependent and are executed simultaneously. The purchasing cycle is a dissection of a purchasing transaction to show what it consists of, who is involved and the required documentation. Both manual and computerised purchasing systems have these basic elements.

A simple illustration of the steps in the purchasing cycle is provided in Figure 6.2.

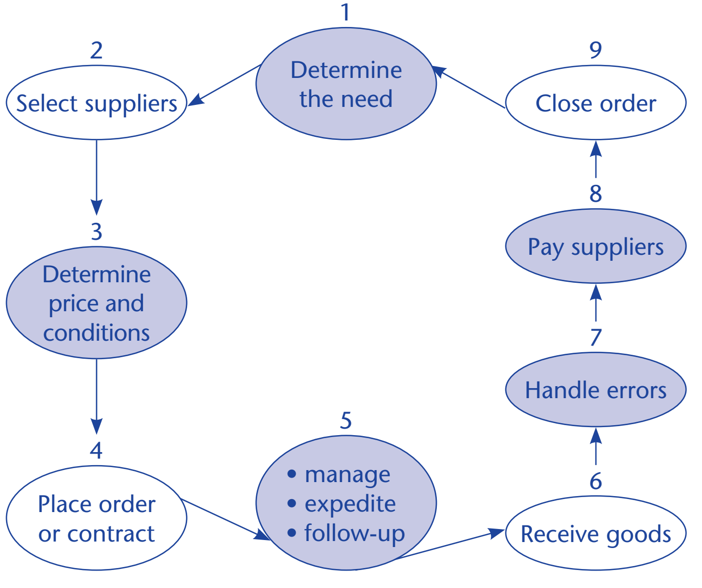

Figure 6.2: The purchasing cycle

Step 1: The development and description of the need

The need for products or services in a retail business (such as Edgars) develops in the marketing section – the sales in the stores. In a manufacturing business (such as a manufacturer of geysers) and service businesses (such as banks) the need for materials and services develops mainly in the operations function. These functions will identify their needs in a document called a *requisition*. This clearly specifies what materials, products or services are required, of what *quality*, in what *amounts* (quantity) and the *time* by which they are needed. The purchasing function can assist the other functions to draw up clear specifications. (The important purchasing activities 'determining the right quality, quantity and time' will be discussed further in sections 6.4.1, 6.4.2 and 6.4.5.)

Step 2: Choice of suppliers

The choice of the right supplier is the principal activity of the purchasing function.

The complexity of this decision will depend on various factors, including, for example, whether this is a new purchase or a repurchase, whether a contract needs to be entered into or whether a contract already exists, and whether standard or special materials are required. Depending on the situation, the purchaser will use documents such as the supplier register, order forms, contracts, price lists, quotations or tenders.

When a contract exists and it is a repurchase situation, the purchaser can react easily and quickly to the demands of operations or marketing functions. In a new purchasing situation, especially where a contract has to be drawn up, determining the present and future availability of the materials is a vital consideration in the choice of suppliers. Determining the future availability of materials is complicated. A study of the technical, managerial and financial abilities of suppliers, their progressiveness and past performance (if used in the past), is necessary. (This activity will be discussed in more detail in section 6.4.3.) The marketing and operations functions may make recommendations about a particular supplier, but the final choice rests with the purchasing and supply function.

Step 3: Determining prices

This is actually integrated in the previous and next steps. The selection of a particular supplier for an order or contract will only be made if an acceptable price is offered by a supplier. (This step will be discussed in more detail in section 6.4.4.)

Step 4: Placing an order or concluding a contract

The order and the contract are important documents because they clearly spell out to the supplier the needs of the business and the conditions of the purchasing transaction, and because they constitute a legally valid contract to which both parties are bound by law. The order or contract should contain specific conditions for the transaction in respect of quantities, quality, prices, discounts, delivery dates, customs clearance and exchange rate issues. (The last two items apply only to imported goods.)

Step 5: Expediting and follow-up

The purchasing function's task is completed only when materials of the right quality have been received, in the right quantities, at the right place and most importantly, at the right time. One of the administrative tasks of the purchasing function is to determine whether materials are received on time. If not, the supplier should be reminded by telephone, facsimile or email that they have not adhered to the clause of the contract and that they should make an extraordinary effort to rectify the situation urgently. The importance of this task is often underestimated. If a supplier is late with deliveries, it can disrupt the operational processes in a manufacturing business (eg a bakery), or leave a retailer (eg a bookshop) with empty shelves. This can also have serious implications for supplier relations and the continued or future use of a specific supplier. The supplier will make out an invoice to the purchasing business containing information about the goods that have been ordered and the money owed to them upon delivery of the goods. This will be used as a source document for the payment of the suppliers.

Step 6: Receipt, inspection and distribution

Store (warehouse) reception, in many businesses, is the purchasing function's responsibility. They check the quantities and condition of the materials that are received from the suppliers, sign the delivery notes and compile the inspection reports. The materials are then taken up into the inventory in warehouses or distributed to where they are needed in the operations process, on the shop floor or display shelves.

Step 7: Handling errors and discrepancies

If defective materials are received, the purchasing function should communicate with the suppliers in a way that ensures both the prevention of future defective consignments and the preservation of good supplier relations.

Step 8: Paying for the order

It is the task of the purchasing function to check the delivery note, inspection report, invoice and order, to confirm that the quantities, quality, price, discounts and calculations are correct and to arrange authorisation of the payment to the suppliers.

Step 9: Closing the order

Once the supplier has been paid, the purchasing function must file all documents pertaining to the particular transaction or incorporate them into a system for future reference. This is a crucial part of the evaluation of a supplier's performance and constitutes an assessment of the purchasing function's performance.

The most important activities and decisions that inherently form part of any purchasing transaction and the purchasing cycle, namely, that of 'finding the right supplier, to supply the right materials of the right quality, in the right quantity and at the right time', will be highlighted in the next sections.

6.4.1 Quality of purchased goods

The main decisions in each purchasing transaction are quality, quantity, delivery and the price service package offered by the supplier. Quality is probably the most important of these factors. Even if the price and service that the supplier offers are outstanding, material or products should not be bought if the quality is in any way less than required, because the material will not perform the function for which it was purchased.

Quality is inseparable from the other purchasing decisions; for example, the higher the quality of goods, the higher the *price*, and vice versa. Quality also determines the number of suppliers. The higher the required quality, the fewer *suppliers* will there be who are able to satisfy such requirements. Quality also influences inventory holding, or the *quantity* to be purchased. If higher-quality materials are purchased, smaller quantities of materials need to be kept in stock, because fewer incoming materials will be rejected during inspection. Incoming materials rejected by inspection may cause an out-of-stock situation, with interruption in the production process or empty shop shelves.

The following questions should be asked: what is 'quality' and what is the 'right quality'? The definitions below will help to answer these questions:

Definitions

Quality is the totality of features and characteristics of a product that bears the ability to satisfy stated or implied needs.

The ***right quality*** is that quality that is purchased at the lowest price, which satisfies a specific need and performs the function for which it was purchased.

The quality of the purchased materials influences not only the quality of the end product, but also the customer base, or target market, of manufacturing businesses. In retail businesses, the quality of purchased products influences the image of the firm and the kind of customer who will purchase from them. It is, therefore, clear that the operations and marketing functions are directly impacted by the quality of purchased goods. The decisions relating to product/service quality are, indeed, made by the operations and marketing staff, who are the 'users' of the purchased material. However, the purchasing function has an important task to do in checking and querying the specifications and then advising the users of alternative quality materials or products that might be cheaper, yet still fulfil the function for which they are being bought. This is why knowledge and skills in the area of quality management are important for purchasing staff.

Example

In the manufacturing of plastic household products, different manufacturers will purchase different quality raw materials, depending on which target market they want to serve. For example, one manufacturer will purchase cheaper, lower-quality raw materials because they manufacture low-quality, cheap plastic containers for the mass market, to be distributed through national supermarkets. In contrast, another manufacturer will purchase expensive, high-quality raw materials because they manufacture higher-quality products with customer warranties which are distributed through specialised retail stores (eg Homemark).

It is essential that the right quality must be able to be communicated. The user must be able to describe clearly to the purchaser and the supplier the exact quality requirements of the materials that they need. The description of quality is also important because it serves as a measure for judging the quality of incoming materials by means of inspection. The following are methods to describe quality:

Specifications

Specifications are the most general method of describing quality. A specification is a description of non-standard materials that are able to perform certain functions. Specifications can be drawn up according to dimensions or physical features, such as tolerances, workability, uniformity and chemical composition. Materials or products that are typically described by specifications include raw materials for the manufacturing of medicine, custom-made furniture, construction materials, confectionery, pre-prepared food and manufacturing equipment.

Standardisation

Standardisation is a further aid when describing quality. It is the process of making materials, methods, practices and techniques uniform. Standardisation implies that the characteristics of items have to comply with a specific minimum acceptable standard, but, at the same time, the types, sizes and grades of an item are limited. Standardisation can be set by a business, a particular industry, nationally or even internationally. Standardisation has several advantages. If a business standardises its inventory the total inventory can be reduced, because fewer kinds and qualities are kept. Standardisation also improves collaboration and communication between the internal user (in manufacturing or marketing), the purchaser in the business and the supplier. Industrial and international standards allow for the mass production of materials, with concomitant cost and price reductions. Because many suppliers manufacture standard products and materials, they can be purchased everywhere. Competition in the market is increased; hence the price of products decreases.

Example

Examples of nationally and internationally standardised products include bricks, pipes, light bulbs, screws, bolts, windows and door frames.

Other forms of quality definition

Other forms of quality description are market grades, brands, the South African Bureau of Standards (SABS) mark, engineering drawings and samples.

Example

Examples of market grades are those used for meat, fruit and vegetables. Brands include names such as All Gold, Nike, Koo and Levi's. SABS-marked goods include domestic equipment, school shoes and uniforms. Engineering drawings are plans drawn up for the construction of a factory or bridge and samples are toiletries such as perfumes, deodorants, body lotion and cleaning products.

6.4.2 Purchasing quantities and inventory costs

Marketing and operations budgets are based solely on demand estimates and the supply of materials to the business is often unreliable regarding delivery and quality. The purchaser therefore has to purchase more materials than are required, with the result that inventory holding becomes necessary. If inventories are not kept (as indicated earlier) and there is an interruption of the flow of materials from suppliers to the business, the manufacturing process can be interrupted or the shelves of retailers can become empty, resulting in lost sales. On the other hand, there is a worldwide trend towards keeping minimum inventories, for the reason that inventories tie up large amounts of operating capital and generate considerable costs. Either too little or too much inventory is undesirable: both have certain cost implications and disadvantages. It is clear that inventory holding is inextricably intertwined with the task of a purchaser and, in particular, influences decisions on purchasing quantities.

The two types of quantity-related, or inventory, costs are inventory-carrying (or 'inventory-holding') and inventory-ordering costs. *Inventory-carrying costs* include storage, salaries of warehouse staff, insurance, property tax, write-offs due to product obsolescence, theft, wear and tear, interest on capital and opportunity costs. Larger order quantities cause larger inventory levels and therefore *increased* carrying costs, and vice versa. *Inventory-ordering costs* are the cost of placing orders, including salaries of purchasing staff, stationery, telephone, fax and online costs. Larger purchasing quantities result in fewer orders being placed and a *decline* in ordering costs, and vice versa. Therefore, as a certain quantity of items is purchased, holding and ordering costs increase and decrease in opposite directions to each other. It is partly the task of the purchasing function to determine the optimum quantity that results in the *lowest total cost* of inventory.

Inventory control

Inventories should be controlled and kept at a level that will ensure the lowest total cost to the business with the most reliable service (availability of stock) to the internal users and external customers. The quantity of materials ordered from the suppliers must ensure that inventories are kept at this optimum level, where the total inventory cost is at its lowest and the possibility of an out-of-stock situation is small. There are two basic types of systems to control inventories: the fixed-order-quantity system and the cyclical ordering system.

The fixed-order-quantity system

According to the fixed-order-quantity system, an optimum level for each item in inventory is determined. A *fixed order point* (at a certain level of inventory) and a *fixed quantity* to be ordered are determined for each item according to a formula known as the economic ordering quantity, or EOQ. This system is illustrated in Figure 6.3. The business uses or sells the inventory items and the inventory levels drop (from A to B, D to E and G to H). When a certain level or point is reached (points B, E and H), a fixed quantity of items, the EOQ, is purchased (EOQ = CD = FG = IJ). After the order has been made, the business keeps on using or selling units of the specific item and the inventory level drops further (from B to C, E to F and H to I). If the EOQ was calculated correctly, the ordered material will reach the business before or when the minimum inventory level is reached. Stocks will then be replenished to more or less the maximum inventory level.

Example

A stationery shop may calculate that they have to order photocopy paper as soon as they have 100 boxes left in inventory (order point B), and they need to order 150 boxes of paper (EOQ) to ensure that they will not run out of photocopy paper before they have received the ordered consignment from the suppliers. Before they have 10 boxes left (minimum inventory level C), they expect to receive the 150 boxes that will replenish the stock of paper to more or less the maximum level (level A).

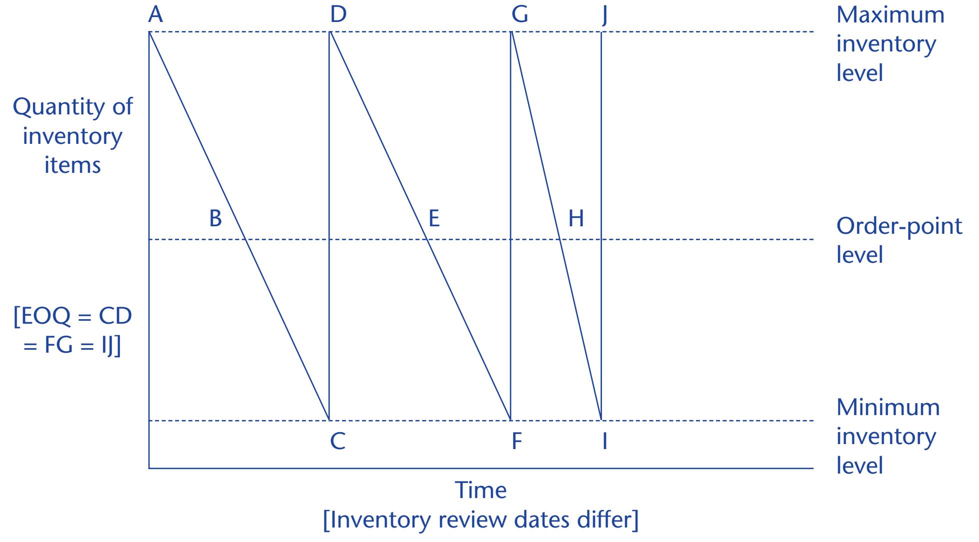

Figure 6.3: The fixed-order-quantity system

The advantage of this system is that it focuses on a specific item only when the inventory level reaches the ordering point, and the same quantity is ordered every time. This system, however, is unsuitable for items whose consumption or lead times are unreliable.

The cyclical ordering system

This system is illustrated in Figure 6.4.

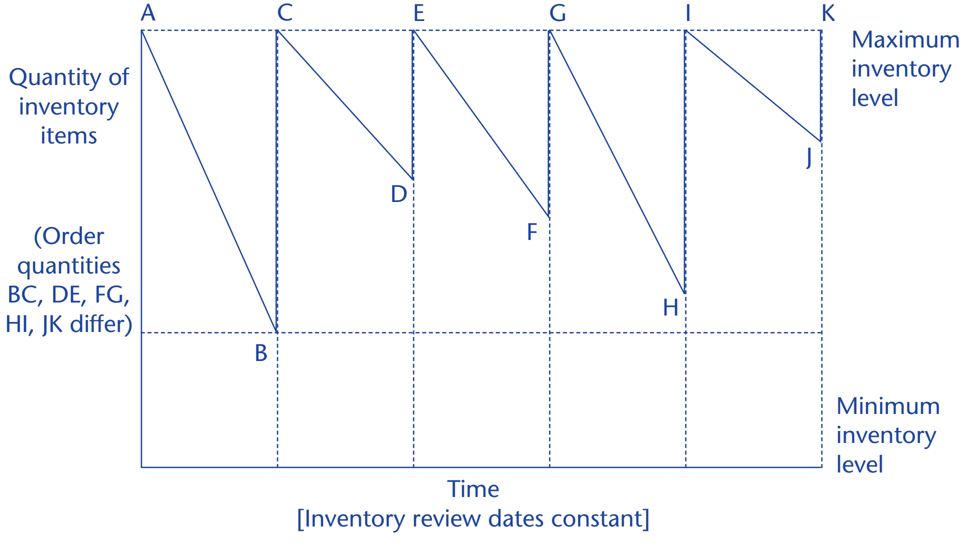

Figure 6.4: The cyclical ordering system

With this system, each item of inventory is checked at fixed intervals (say, weekly or monthly) and an order is placed to replenish the inventory level to its maximum level. The order times are, therefore, fixed, but the order quantity varies (BC, DE, FG, HI and JK differ in Figure 6.4). This system is suitable for seasonal materials used on an irregular basis, but where the purchasing of such materials can be planned far in advance on the basis of forecast; for example clothing manufacturers or shops. This system is used in grocery stores, where, at the end of a period (say, every week), stocktaking is done for the specific item on the shelves and the order quantities adjusted according to the quantity left on the shelves. For example, more tins of soup are ordered with every order cycle in the winter than in the summer.

There are many computer-assisted inventory control systems in use, many of them based on the principles of the above systems. The main aim of all of these methods is to minimise inventory holding. These systems include materials requirements planning (MRP) in manufacturing firms; just in time (JIT); quick response (QR); automatic replenishment (AR) and efficient consumer response (ECR). They involve totally integrated computer systems and the close cooperation of suppliers.

6.4.3 Selection of suppliers

The selection of suppliers is one of the most vital tasks of the purchasing function. Competitive prices, reliable quality, timely deliveries, technical support and good after-sales service are determined primarily by the choice of the right suppliers. The aim of selecting the right suppliers is to establish a long-term relationship to ensure the efficient flow of the correct materials, products or services to the business.

Existing suppliers with a good performance record should receive preference when a new contract has to be concluded. However, new suppliers need to be evaluated to find out whether an existing supplier is still competitive when new products or materials are needed. The amount of care taken in the selection process will be determined by the scope of the transaction, the availability of the materials in the supply market, the strategic value of the materials or services and whether they are standardised or custom-made. The latter refers to items that are made for a specific purpose and are not freely available on the market. In this case, much care needs to be taken to choose the correct supplier. Standardised items are freely available on the market at more or less the same price; the selection of a supplier in this instance is, therefore, not important.

The *selection process* consists of a number of steps, as indicated in Figure 6.5 on the next page.

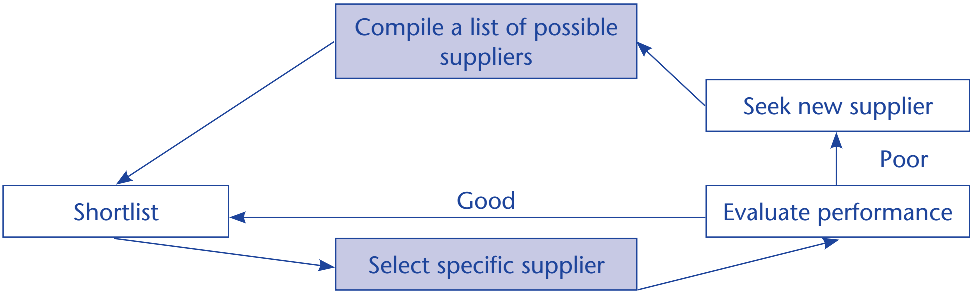

Figure 6.5: Supplier selection process

The selection process starts with the compilation of a list of suppliers that may be able to satisfy the need. The list can be compiled from industrial advertisements, the *Yellow Pages*, trade guides, open tenders, shows and exhibitions. The list is then reduced to a shortlist, after taking into account factors such as location, progressiveness, general reputation and financial and technical capability. This is done by analysing the financial statements of the supplier, making personal visits and conducting interviews with their staff and management, talking to other clients of the supplier and obtaining credit bureau reports.

Suppliers on the shortlist are then requested to give a quote, and/or negotiations are conducted with them, to obtain the best value in respect of price, quality, service and delivery. All the above factors are taken into account to reach a decision about choosing the right supplier(s).

The *supplier's performance* must be *evaluated* continuously to ensure that it conforms to expectations according to the contract. In this way, a supplier who performs unsatisfactorily will be eliminated and the contract terminated. Such a supplier will also not be considered for future orders. Records must be kept of every time materials or products are received after the due date, whether low quality or defective materials/products are received and need to be sent back, and how long suppliers take to respond to orders or requests. The purchasing function can decide to terminate a contract or cancel orders if a supplier repeatedly fails to conform to the conditions of the contract. At the end of a certain period (for example a month, a quarter or a year), the purchasing function can decide whether a supplier is 'good', 'satisfactory' or 'unsatisfactory' based on their performance records, which are kept up to date. These will be taken into account when a new contract needs to be negotiated.

In the selection and evaluation of a supplier, other user functions (eg marketing and operations) may make recommendations about a particular supplier, but the final decision rests with the purchasing function.

6.4.4 Purchasing prices

The pricing decision goes hand in hand with the selection of the supplier, order quantities and the required quality. Traditionally, price has been regarded as the decisive factor in awarding orders or contracts. However, the lowest price is not necessarily the 'right price' because price is intertwined with quality and quantity. Instead, the *total* or final total cost should be seen as the decisive factor in awarding orders. Price should be regarded as only one of the components of the total value package, together with quality, delivery and cost of use. A purchaser should always strive to obtain the *highest value* for the business and not just the lowest cost.

Purchasing prices for standard products of low value, such as stationery, screws or photocopy paper, can be determined easily through published price lists, catalogues, brochures and advertisements in trade journals. For non-standard products (eg custom-made furniture), standard products of high value (eg office equipment) or large quantities, suppliers can be contacted and asked to give a quotation. Quotations are quick and can be made by telephone, fax or electronically.

For construction projects of high value, where there are many possible suppliers, a long time span and complicated calculations, the best method to determine the price of a contract is through *open tenders*. The purchaser will put an advertisement in newspapers and ask for suppliers to tender.

Negotiation can also be used to determine prices. Quotations and tenders are also usually followed by negotiations to determine the final price. Negotiations entail a personal meeting between the purchaser and the supplier, with the objective of reaching a compromise and concluding a deal. For negotiations, a purchaser needs to prepare carefully and be knowledgeable about the processes involved, materials to be used, availability and costs. Negotiations are only justifiable in transactions of high monetary value, where contract conditions are complex, when the execution of the contract extends over a long period or where there is a monopolistic situation in the supply market.

6.4.5 Timing of purchases

The time when purchases are made often determines the price paid for materials. And, in the same way, the quantity to be purchased is influenced by timing and price. The aims of purchasing at the right time are to ensure that the business is supplied on an ongoing basis with the materials, products and services required for it to operate without interruptions, and to keep inventory holding at an optimum level.

Various internal and external factors influence the time at which purchases should be made. Internally, the availability of funds, marketing and operations plans and strategies determine when products can be purchased. Physical facility, such as storage space, is also a factor that influences the timing of purchases. Internal policies also determine the scheduling of purchases. There are three policies that principally affect the timing of purchases:

1. The most common policy is **scheduling purchases according to needs.** This policy entails purchasing materials when the business needs them, regardless of the price and market conditions. It is ideal for purchasing standard materials, but is sometimes also adopted by businesses that purchase in unstable markets (eg agricultural products).
2. **Advanced purchasing** involves the purchase of more materials than required, the aim being to ensure future availability. However, one disadvantage is that excessively high inventory levels lead to high inventory costs.
3. **Minimum purchasing** entails scheduling purchases so that inventory is available only for the immediate needs of the business. Inventory is kept to a minimum and no buffer stock is held. This policy is normally applied when prices of materials are in a downward phase. With this policy the business runs the risk of running out of stock.

External factors that influence the time of purchase are market conditions (availability, recessions, booms), government regulations and seasons.

Example

Faced with the struggling local textile (clothing) manufacturing industry, the South African government is becoming stricter about the importation of clothes from China. If a boutique in Pretoria purchases most of its stock from China (and if the increased import duties mean this is still a viable option), they will have to order earlier to make up for additional time delays in obtaining permission from the government.

Other external factors are lead time (particularly important in the case of imported goods) and reliability of suppliers.

6.5 Summary

No business can operate without a purchasing function. The purchasing function assures the availability of the required equipment, materials, products and services when and where these are needed to run the business successfully. The performance of the purchasing function has an important impact on other business functions and the business as a whole.

Questions for self-evaluation

1. Explain the role and importance of the purchasing function in a business.
2. Explain why the purchasing function spends more of the available money in some businesses than in others.
3. Explain the interdependence between purchasing planning, business planning and the planning of other business functions.
4. Explain the centralisation/decentralisation issue in purchasing.
5. Explain the performance evaluation of the purchasing function in a business.
6. Illustrate and explain the purchasing procedure that is generally followed in businesses.
7. Explain quality issues and the methods to describe quality in the purchasing of materials and services.
8. Explain the issue of purchasing quantities in a business.
9. Explain, with the aid of diagrams, the working of the fixed-order-quantity and cyclical ordering inventory systems.
10. Illustrate and explain the supplier selection process and explain the factors influencing the selection of suppliers.
11. Briefly explain purchasing prices as part of the total value package.
12. Briefly explain the principal methods of determining prices.
13. Briefly explain the internal and external factors influencing the timing of purchases.

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The human resource function

CHAPTER 7

Learning outcomes

After studying this chapter, you should be able to:

- draw up a job description for a post
- describe the process for employing staff
- compile an orientation programme for newcomers
- draw up a framework for a training programme
- explain the concept of human resource maintenance.

7.1 Introduction

The human resource – or personnel – function differs from the other functions of the business in the sense that the tasks and activities related to personnel also form part of all the other functions of the business. Each individual who has authority over other employees, from top management to supervisory level, is involved in personnel work to a certain degree.

Most businesses operate on a continuous basis. This means that they do not exist for a few months and then stop their business. They usually plan to be in business for a longer period of time. As time goes by, businesses grow and their employees get promoted, resign and some of them die. Those lost have to be replaced to enable the business to continue as before. Just as the heart supplies the body with blood to enable it to live, the human resource function supplies the business with people to enable it to do business continuously. One of the primary objectives of the human resource manager is to ensure that a business employs the right number and type of employees at the required time.

To achieve this, the human resource manager must carry out the following functions:

- Human resource planning (the process of ensuring that the business has the right skills at the right time).
- Recruitment (to seek and find potential employees).
- Selection (to choose the most suitable person for a specific post).
- Placement (when the employee is placed in the post).
- Orientation (whereby the new employee is introduced to the business, its procedures, the work environment and the other employees).

The human resource function is also a critical component of personnel well-being. The human resource manager is responsible for the best utilisation and maintenance of labour as a production factor in the business. This includes the training, development and maintenance of personnel (including remuneration, labour relations, personnel administration and working conditions).

Even though all businesses are not the same size, ranging from one-man concerns and small partnerships to large companies, there are always human resource activities to be carried out and managed. This does not mean, however, that each business has a separate human resource division. A small business (one with fewer than 50 employees) is unlikely to have a separate human resource division. In such a case, the entrepreneur will normally decide how the human resource function will be managed. There are many different options such as:

- one person may be appointed to handle all the human resource tasks
- one person may be appointed to handle all the human resource tasks in conjunction with another function, such as the financial function
- entrepreneurs could handle it themselves
- the entrepreneur could make use of temporary employees to handle the function
- the entrepreneur could outsource the human resource function (ie making use of an external business to manage it).

In larger businesses, it is not possible for the entrepreneur and line managers to handle all staff matters effectively themselves. They need expertise and assistance, and so a human resource division is usually established.

The head of the human resource function has various designations, including 'personnel director', 'personnel manager', 'manpower manager' or 'human resource manager'. The latter term is currently used by most businesses.

7.2 Provision of human resources

7.2.1 Human resource planning

As mentioned, from time to time a business needs to employ new staff members. There are various reasons for employing new people. These could include replacing people who resign, or the business is expanding and people are needed to handle new technologies that are being introduced.

In order to employ new members of staff, the human resource manager must determine what type of people, and how many, are needed for the business to expand or continue productively. Information regarding the vacant positions must be obtained. The process of gathering information is called a job analysis. This information is then used to compile a job description and job specification.

Firstly, all the information relevant to the position needs to be collected. This can be done through observation, interviews and questionnaires. Secondly, the information is divided into a job description and a job specification. The *job description* describes the duties, relationships of authority and responsibilities of the person in a specific job. The *job specification* contains the details of the requirements that the person needs to be able to do a specific job.

The following is an example of an entrepreneur with a small clothing business, who cannot cope with the volume of work anymore. They decide to get assistance, but are not sure exactly what kinds of people are needed or how many.

Example

The entrepreneur starts by doing a job analysis, ie collecting all the important data about the work. They make a list of all the tasks that must be performed in the business. Then they group all the tasks that logically belong together and that can be done by one person, such as the tasks to do with money, income and expenditure. Such a combination of tasks can become one person's job.

List of tasks:

1. Conduct market research to determine what sizes, types and quantities of clothing are to be purchased.
2. Purchase stock.
3. Exhibit clothes.
4. Maintain stock at optimum levels.
5. Sell the clothes.
6. Keep records of accounts.
7. Keep the books up to date.
8. Calculate ordering and stock quantities.
9. Market the department.
10. Coordinate continually with the entrepreneur.

Grouping of tasks:

Person 1:	Tasks 1, 2, 4, 9 and 10	This could be a head of department.
Person 2:	Tasks 3, 5	This could be a salesperson.
Person 3:	Tasks 6, 7, 8	This could be an accounting clerk.

Now, the entrepreneur has the option of appointing three people to do these tasks. If, however, the business is too small to warrant this number some of the jobs could be combined, requiring only two people to be appointed. An accounting clerk could also be appointed on a part-time basis, for example for one day a week.

Once the entrepreneur has decided on the number of possible new employees, job descriptions and job specifications should be drawn up for those positions. Job descriptions should be kept up to date so that the work poses a challenge and keeps an employee busy for an entire day. This process is explained in Table 7.1.

Table 7.1: Job analysis, job description and job specifications

<table>
<tr><td colspan="2">Job analysis
A process to collect all the important data about the job. This includes duties, responsibilities, skills needed, outcomes and working environment. From this a job description and job specifications are drawn up.</td></tr>
<tr><th>Job description</th><th>Job specifications</th></tr>
<tr><td>This is about the job itself and includes the following:</td><td>This is about the qualifications required by the person who will be doing the job. It includes the following:</td></tr>
<tr><td>Job status: permanent
Job title: accounting clerk
Location: administration section
Job summary/outcome: manage and attend to all administrative and financial matters
Duties: keep record of accounts, keep the books up to date and calculate ordering and stock quantities
Equipment: computer
Supervisor: UR Boss (entrepreneur)
Job environment: private office with air conditioner
Dangers: none</td><td>Qualification: BCom with Accounting and Financial Management III
Experience: two years in similar position
Training: stock control
Physical exertion: count stock on high shelves (use ladder)
Responsibility: all administrative and financial matters
Personality: friendly, confident, honest and hard-working</td></tr>
</table>

Of course you can also include in a job description any additional information you deem necessary.

You will probably use the job specification when advertising the position, so adapt it to your specific needs. Put in all the qualifications and attributes that you want the candidate to possess.

The job description and job specification are important aids for an entrepreneur. They are not only used for appointing new employees, but also for the following:

- control purposes where work done is measured against standards set
- performance evaluation to determine whether outcomes were reached
- promotions to see when employees are doing more than what is expected
- the identification of training needs where outcomes are not met
- the establishment of salary scales when looking at job content.

Now that you know exactly what type of person you need in the business (according to the job description and job specification), you have to look for the person to fill the vacant position. The process of finding suitable persons for the job is called *recruitment*.

7.2.2 Recruitment

If there are any people in the business that could fill the position, you could consider them for the job if it would be promotion for them. If this is not the case, you will have to look for suitable employees outside the business. So, the two sources available for recruitment are *internal* (existing employees) and *external* (the labour market outside the business).

A temporary shortage of staff, however, could be overcome by having the existing employees work overtime, training existing employees, subcontracting and outsourcing.

Once the personnel need is determined, the human resource manager must find suitable workers and motivate them to apply for the available positions. Recruitment consists of those activities and efforts on behalf of the business to seek and find suitable potential employees and to persuade them to apply for the available positions in the business.

Remember that all the decisions and actions concerning recruitment (including the sources of, and general approach to recruitment) should fall within the framework of the recruitment policy of the business.

As an example, let us assume that there is a position in the business that has to be filled. As you have seen, the details of the position are set out in the job description and specification.

Recruitment can now be done internally or externally. Internal sources are usually tapped when suitable employees are available inside the business. Of course, this depends on whether they have the potential to be trained and prepared for the available positions and groomed for more senior positions. Internal recruitment methods include job posting, self-selection, proficiency surveys and references.

- **Job posting** is one of the most popular methods of filling positions in a business. It includes: traditional noticeboards, email-based systems and recruitment systems. The positions are ‘advertised’ internally through any of these methods.
- **Self-selection** involves advertising the position within the business. Any employee who meets the requirements may apply.
- **Proficiency surveys** are done on employees within the business. Their training, experience and qualifications are updated and kept on file; when a post falls vacant, the job specification is compared with the surveys to identify a suitable candidate.

- **References** are used for recruiting both internally and externally. Current employees recommend their family and friends (often not allowed) for vacant positions.

If there are no suitable internal candidates, external sources have to be used. A combination of sources may also be exploited. Examples of external recruitment sources and methods are:

- **Training institutions** such as schools, colleges, and universities.
- **Self-presentation** where job-seekers present themselves at employment offices.
- **Advertisements** in newspapers, magazines and electronic media.
- **Employment agencies** who recruit on behalf of businesses. The following are examples of such agencies in South Africa: 'Find A Student', 'Employ SA', 'Jobfinder', and 'Affirmative Portfolios'. Of course, recruitment agencies are not free, and they will charge the company a fee equal to a percentage of the salary of the appointed person. Some also negotiate a placement fee or recruitment commission.
- **Professional institutions** include specialised employment agencies, such as the South African Institute of Chartered Accountants, 'Executives on the web', and 'Skill Sourcing' (which caters for information technology staff).

Important

Keep in mind that there is a high cost involved in making use of employment agencies and professional institutions. However, this might be worth it if you take into account the internal costs and problems incurred by doing the recruitment and selection yourself.

The question that arises is which of these methods should one use. Lower-level posts, such as officials, artisans and junior sales staff, could be advertised in a local newspaper. If you are looking for a specific type of employee, you have to advertise specifically. Specialised periodicals can be used. If you are looking for a human resource person, you could use human resource periodicals, magazines or professional associations. When middle- and higher-level positions are vacant, you may wish to advertise more widely, such as in the weekend newspapers or national periodicals.

To advertise a position you need to compile an advertisement. The following information should be included:

- job title
- salary
- important features of the work

- requirements of the successful candidate
- fringe benefits
- application procedures
- the person in charge of the applications
- a brief description of the business.

Of course, you may omit some information and add other details to suit your needs.

YOUR TASK: Look at current advertisements to give you more ideas. Look on the internet and in newspapers. Choose one advertisement for a position as a Human Resource Official. Compare the information in the advertisement with the information given above. Is it a good advertisement?

Figure 7.1 shows an example of a job advertisement from the internet.

During the recruitment campaign, candidates apply for available posts. Applications are accepted until a predetermined date on which applications close.

7.2.3 Selection

Once an advertisement has gone public, potential employees will start applying for the position and you will start receiving applications. The next step is called the selection process. Selection is the process by which the business chooses the most suitable person for the advertised position from the list of applicants.

Various selection methods may be used; it is advisable to use not only one but a combination. Each method has particular advantages and disadvantages. Whichever methods you use, they should give you the information you require. Cost-efficiency should also be taken into account. The following selection tools are available:

- application forms
- interviews
- psychometric tests
- physical tests and exams
- background investigations
- assessment centres
- medical examinations
- references.

University of South Africa

DEPARTMENT: UNIVERSITY ESTATES
DATA ANALYST/INFORMATION OFFICER

(Ref: 12345)

The purpose of this position is to provide ***information for management***, ***decision-making*** and ***planning purposes***, for ***statutory reporting*** and for the ***servicing*** of ***internal*** and ***external ad hoc information*** requests.

Requirements

- Grade 12 plus three-year degree/National Diploma in Quantitative Management/ Computer Science or related field
- Four years' experience in extraction and manipulation of data for reporting purposes
- Computer literate in Microsoft Office packages and with advanced MS Excel
- Knowledge and application of data audits and data extraction
- In-depth knowledge on information/records administration
- Knowledge and understanding of Management Information Systems for reporting
- Ability to utilise data analysis models and tools for quantitative/qualitative data analysis
- Must have good interpersonal and communication skills (verbal and written)
- Must be a flexible, analytical and innovative thinker with sound judgement and decision-making skills
- Must have good time management skills and with adherence to deadlines

Recommendation

- Knowledge of SQL databases and reporting
- Application of Facilities Management Systems

Duties

- Standard reporting
- Ad hoc reporting and liaison
- Data audit
- Ensure effective and efficient communication with all stakeholders.

Assumption of duty: 1/1 2016.
Salary: Remuneration is commensurate with the seniority of the position
Closing date: 1/11/2015.

Enquiries: (012) 429 1111 Ms JT Mahlangu (HR Staffing & Client Services)

The completed prescribed application form must be accompanied BY COMPREHENSIVE CURRICULUM VITAE and ORIGINAL certified copies (within the previous six months) of:

- all educational qualifications;
- academic transcripts/records;
- identity document; and
- proof of SAQA verification of foreign qualifications.

The detailed advertisement together with the prescribed application form can be found on the Unisa website (www.unisa.ac.za). Completed applications can be posted to HR Staffing, PO Box 111, Unisa 0003. Hand delivered applications can be deposited into the Application boxes situated at the Main Building.

Figure 7.1: Example of a job advertisement

Source: www.unisa.ac.za

Application forms consist of a list of general questions aimed at collecting biographical data and specific questions regarding the requirements of the vacant post. This enables you to obtain a general impression of how suitable a person is and to determine whether the person meets the minimum requirements of the post. You should be familiar with the latest legislation regarding issues such as faith, age and gender. Questioning candidates about these issues is not permissable.

The *selection interview* is a discussion between the applicant and the employer aimed at obtaining further information regarding the applicant. (The employer may also ask other managers and/or specialists to sit on the selection interview panel to assist with the process.) Simultaneously, the interview gives the applicant the opportunity to obtain more information regarding the business and the job in question.

Psychometric testing is used to obtain information regarding the personality of the applicant or to make sure that the information obtained during the interview is correct. These tests must by law be performed by professionals in this field, and include personality and aptitude tests.

Physical tests are done to determine whether the candidate meets the physical requirements of the job. These tests can also identify possible hidden ailments.

Background investigations are done to check previous employment, criminal records and even credit record. The depth of such an investigation will be determined by the type of job applied for. Employees working with money will obviously be checked more thoroughly.

At *assessment centres* the job content is investigated and the aptitudes and behaviour required of the incumbent are identified. Exercises are designed for the applicant to do. The behaviour of the applicant is observed and recorded by trained assessors. This gives applicants the opportunity to show their specific skills, characteristics and behaviour. Examples of such exercises are the 'in-tray' exercises and case studies.

Medical examinations used to be quite popular as part of the selection process, but are now prohibited, unless:

- legislation permits or requires the testing
- it is justifiable in the light of medical facts, employment conditions, social policy, the fair distribution of employee benefits or the inherent requirements of a job (Employment Equity Act, ss 7 and 50).

References provide information about the applicant's job history and are supplied by previous employers/managers/supervisors. This is done with the applicant's permission.

The selection procedure is not the same for all businesses and differs according to needs and preferences, but for most purposes the following steps can be followed:

Step 1: Conduct a preliminary selection interview

Determine whether the qualifications and interests of the applicant are suitable for the requirements of the post. The idea is to get an overall impression of the candidates and to provide them with general information about the business. Those applicants who have not yet completed application forms are asked to do so.

Step 2: Application form

Some businesses prefer to have the application form completed as the first step. They work through the forms received and thereafter invite chosen candidates for a first interview. The application form is designed around the specific needs of the business. Personal information (such as qualifications, training and experience) is evaluated and compared with the job specifications. If you do not have such a form, look at other businesses' application forms and create your own according to your requirements.

Step 3: Selection tests

The type of work will determine the tests that need to be done. These are designed to obtain additional information, including intelligence, computer skills, personality traits and other special abilities that could not be obtained from the application form.

Various tests exist for the following: clerical aptitude, vision, interest and intellectual ability. These tests are done by specialists, and it is advisable to spend some money at this stage on having the tests done professionally rather than running the risk of appointing the wrong person and experiencing great frustration at a later stage.

Step 4: Check references

Any information that is not yet known can be obtained from previous employers or referees. (A referee is a person whose name the applicant provides and from whom you can obtain more information on the applicant.) Such information can be obtained by telephone, email, letter or a personal visit.

Important

This step is essential to determine the credibility of the applicant and should not be neglected. You can learn much from previous employers. Remember, however, to 'read between the lines' when you speak to previous employers, because they may gloss over important defects in the applicant's character.

Step 5: Final interview

During this interview, all the information gathered during the selection process is integrated, and you should aim to clarify uncertainties. Usually a team is present at this interview; the panel should include the line manager, the human resource manager, a union representative and anyone else that this team considers necessary, such as a specialist in the field relating to the vacant post. This person could assist with specialist job knowledge. The candidate is also given an opportunity to ask questions and clarify any uncertainties.

The objectives of the final interview are to determine whether the candidate is suitable for the vacant position and whether they would be able to get along with the manager and the other employees in the section. Look at the person as a whole, the good and the bad points and remember that no one is perfect. Past performance is usually a good indication of what to expect in the future.

Prepare the questions that you want to ask. The following are examples of interview questions:

- Why are you applying for the post?
- How do you view your role in the business?
- How do you see yourself contributing towards making the business more productive?

Step 6: Medical examination

The candidate must be physically suitable for the job to be done. If there is any problem, it should be identified in good time. High medical claims and absentee figures will thereby be avoided.

Step 7: Final choice

The candidate who is finally selected is usually the one whose qualifications, experience and personality most closely match the job specification. Be objective, and remember that you need someone who can do the job.

Step 8: Final offer

Make an offer in writing to the chosen candidate. In the letter you could congratulate the person, give a starting date, salary scale and other benefits attached to the job. In larger organisations the administration and actual appointment are usually handled by the human resource section.

The applicant must now decide, within a stated time frame, whether or not to accept the offer. The offer may also be negotiated, depending on the wish of the entrepreneur. Conclude a contract with the prospective employee/candidate. The contract usually contains the basic policy and conditions of service of the business; working hours, leave and overtime are also usually specified in this document.

If the offer is not accepted, the next most-suitable candidate should be considered.

Step 9: Appointment

When the candidate accepts the offer, top management authorises the appointment and the human resource section finalises all administrative matters. The selection process comes to an end here.

7.2.4 Employment and placement

Employment involves not only the process whereby the new employee reports to the workplace, but also the accompanying administrative tasks that have to be performed. The human resource manager ensures that the necessary forms, such as unemployment insurance, tax and medical aid (where applicable), are completed, and that any other outstanding information is obtained from the employee. Arrangements for the delivery of the newcomer's furniture and work items are also made (where applicable).

Placement, which is the penultimate step in the process of providing human resources, now follows. This is the process whereby the new employee is placed in the post applied for. The most suitable employee is allocated where his or her expertise can best be utilised to the benefit of the business in carrying out those tasks allocated to him or her. Placement also occurs when an employee is promoted, transferred or demoted. A good recruitment and selection process should automatically lead to effective placement.

7.2.5 Orientation

The orientation process should already be in progress at this stage. The orientation (also known as *incorporation* or *induction*) of newcomers is the process whereby new employees are firstly introduced to the business, its procedures, environment and work situation, and, secondly, to their co-workers, subordinates and superiors.

This is an opportunity that you should use to motivate new employees and put them at ease. There are many benefits for the business in the long term if new employees understand from the very outset how the business works and if they can communicate effectively with their colleagues. This will also make a new employee happy and, therefore, productive.

Proper orientation needs an orientation programme. List all the things you should do regarding the new employee:

- before the employee arrives at the business
- on the first day
- during the first two weeks
- during the first six months.

There are many things that you can do during these orientation stages. The following are some suggestions.

Before new employees arrive at the business

Congratulate the appointees. Send formal letters of welcome and information brochures about the business to the successful candidates. Information such as working hours, dress code, schools and estate agents in the area and the general policy of the business is usually appreciated. Ensure that their office or workspace is in order and that the necessary furniture, equipment and stationery are in place before they arrive. Inform the other employees about the newcomers and explain what they will be doing.

On the first day

Be available to meet them and to introduce them to the other employees. Speak to them informally to put them at ease. Show them their office space or work areas. Finalise administrative matters, such as the completion of the necessary forms. Get them working as soon as possible. If necessary, appoint someone to orient the newcomers. Check with them about their transport and accommodation.

During the first two weeks

Newcomers should be introduced to the following systematically:

- the activities of their section and how it supports the business as a whole
- their duties and responsibilities (refer to the job description)

- how, when and where they will be paid
- working hours, leave policy, meal and tea breaks
- the use of the telephone
- dress code
- recreational facilities.

During the first six months

To ensure that the maximum is gained from newcomers, orientation does not end after two weeks. The newcomers have to develop and become more productive. Identify any shortcomings and training needs and see that something is done about these.

An orientation programme can leave a positive and lasting impression on an employee. Management should take advantage of such an opportunity to motivate their employees and to inspire their loyalty. Understanding each other and communicating well from the start will have many beneficial results in the long run.

7.2.6 Human resource provision and the law

Since the implementation of the Labour Relations Act 66 of 1995 as amended by Act 12 of 2002, the Basic Conditions of Employment Act 75 of 1997 as amended by Act 11 of 2002, and the Employment Equity Act 55 of 1998 as amended by Act 47 of 2013, quite a few important issues regarding the employment process have arisen. Human resource managers and entrepreneurs will have to adjust their policies and procedures and apply them fairly and consistently to all applicants. A failure to do so could have major implications for the business. The main issue here is that all forms of discrimination are forbidden by law.

7.3 Human resource training and development

Most newcomers in a business are not really ready to perform their new tasks well. Someone who holds a technical or professional qualification still needs initial orientation regarding the policies, procedures and practices of the business. The training process, therefore, begins with the orientation programme.

7.3.1 The aims of training and development

The concepts of training and development are often taken to mean the same thing, yet they refer to two different activities within the business.

Definition

Training is the systematic process by which the employee acquires knowledge, skills, aptitudes and information necessary to achieve the objectives of the business. The aim of training is to influence and change employees' working habits and levels of performance in such a way that they will become more productive. Training is, therefore, directed at tasks which are in line with the objectives of the business.

Definition

Development is the process whereby managers or potential managers acquire the necessary experience, management skills and aptitudes to function successfully as managers. This process prepares the individual for further career development and promotion. An effective entrepreneur in any business keeps abreast of the latest developments in the areas of technology, economics, politics and management practices.

The basic objectives of training and development are:

- to orient new employees with regard to their tasks
- to improve performance and increase productivity
- to maintain a performance level in spite of changes in the work itself or in technology
- to prepare the employee for promotion.

Before any training can be undertaken, you should first determine whether there is really a need for it. An employee may be experiencing personal problems and their work may suffer as a result. A supervisor may not know this and may mistakenly identify the problem as a lack of knowledge or skills. Training costs time and money, and you should therefore ensure that it is not undertaken unnecessarily.

7.3.2 Drawing up a training programme

When you draw up a training programme, the following steps can be used:

Determine training needs

Before training can commence, a needs assessment should be done. These needs are related to the technical, administrative, management or other skills which employees may require in order to perform their duties productively. It is the responsibility of the direct supervisor to identify these needs.

There are different ways to identify training needs, such as:

- The **employee is asked** to say whether they feel unqualified to carry out a task effectively due to a lack of knowledge and/or skills. Although this is not a scientific method to determine training needs and does not provide for long-term needs, it is a practical method which can be used profitably in combination with other methods.
- **Interviews**, where the human resource manager conducts interviews with supervisors, key people and employees in the business to ascertain whether any training needs exist.
- Using a **questionnaire** is a scientific method of ascertaining training needs. Results obtained are usually comprehensive and based on fact.
- The **management by objectives** technique provides ongoing information regarding the work and progress of the employee. You should, therefore, be able to see immediately whether an employee needs training.

The above are active techniques to determine whether there is a need for training. Sometimes, circumstances or problems arising in a business may indicate training needs. Specific problem areas that need to be investigated include low productivity, high costs, poor quality, high wastage, grievances, a high staff turnover, poor discipline, rule-breaking, a high absenteeism rate and standards that are not being achieved.

Establish the objectives for the training programme (including the type of training)

Write down what you wish to achieve with the training. Be specific and use standards so that your objectives are measurable. The difference between what the worker is supposed to do (see job description) and what they can actually do may also be used as a basis for the training programme. Do the employees need basic training, such as training in the use of the telephone, or more specific training, such as training to enable them to use a new computer program?

Determine suitable training methods

Decide whether you will make use of lectures, in-service training, videos, case studies or other methods. Are you going to instruct, facilitate or both? If the training know-how is already in the business, you can do it internally; otherwise make use of external training specialists.

Present the training or send employees for the training

Decide whether it is best to carry out the training on-site, or to send your employees to another venue.

Evaluate the training

Determine whether the set objectives have been achieved. If not, you will have to reassess the trainer, method, objectives and/or standards (maybe all of these).

Human resource management is not only getting people to work for a business and training them to do the work well, but keeping them motivated and working productively on a continuous basis.

7.4 Human resource maintenance

Human resource maintenance involves all those activities that make the work situation acceptable to the employee. It costs the business a lot of money, time and human resources to employ suitable employees. Entrepreneurs should, therefore, do everything in their power to make the best use of employees and motivate them to ensure that they remain on the staff. In order to accomplish this, we need to look at remuneration, performance management, personnel administration, working conditions and labour relations.

7.4.1 Remuneration

Remuneration is what employees receive in exchange for the input they offer the business. Management has certain responsibilities regarding remuneration.

Important

Remuneration should correspond with the remuneration for the same type of work in similar businesses. Necessary adjustments should be made from time to time to keep pace with the rising cost of living and inflation. Remuneration should also enable the employee to maintain a realistic standard of living and to make adequate provision for the future.

If the above requirements are not met, it can be expected that staff turnover will be high, employees will lack motivation, unions will be in constant wage negotiations and productivity will suffer.

Remuneration can be paid to employees in various ways. We can differentiate between direct and indirect remuneration. *Direct remuneration* is the salary or wage an employee receives. Salaries are usually paid monthly and wages weekly or daily. To differentiate between productive employees and those who do as little as possible, the latter can be paid per task or piece of work. This is known as the 'piece-wage' system: an employee is paid a sum of money as soon as a specific task or piece of work is completed. For example, an employee is paid R20 for each box of products they unpack, regardless of how long this takes.

Every business has its own particular kinds of *indirect remuneration*, or fringe benefits. Over and above the employee's salary, the business may pay the following:

- **Pension:** some employers contribute to an employee's pension.
- **Insurance:** certain types (for example, workmen's compensation and disability insurance) are sometimes borne by the business.
- **Housing:** a subsidy, low interest rates or even free housing can be given.
- **Transport:** various forms of allowances may be given.
- **Leave:** although the Basic Conditions of Employment Act compels employers to allow employees to take leave, this may also be regarded as a fringe benefit.
- **Profit-sharing:** if the profit for a period is higher than a predetermined amount, management could decide to pay the employees a certain percentage of that profit. This makes the employees feel that they have a personal stake in the business, which should have a motivating effect.

Indirect remuneration (or fringe benefits) are not *necessarily* given to all employees. It usually depends on the level of the employee's post. Certain fringe benefits are given only to employees above a specific level in the hierarchy. The combination of direct and indirect remuneration is usually referred to as the employee's package.

The main question is usually how much to pay the employee. When a salary is determined, it is a good idea to look at the salaries of similar posts in other similar businesses. The value of the post must also be compared with the value of other posts in the same business. Remuneration systems may be determined in various ways, but this is usually done by the human resource specialists.

Posts are arranged in order of rank from the employee on the lowest level to top management. A remuneration policy is determined, and a salary scale is assigned to every post in the business. The policy should be made known to the employees, and they should know why they are linked to a particular salary scale or structure. Table 7.2 shows an example of salary scales for a small business.

Table 7.2: Examples of salary scales for a small business

Post level	Job title	Salary scale (per annum)
1	Cleaner/messenger	R36 000 – R60 000
2	Salesperson/administrative official	R60 000 – R140 000
3	Senior clerk	R120 000 – R200 000
4	Supervisor	R160 000 – R340 000
5	Co-director	R400 000 – R800 000

There are other factors that will also determine how much employees are paid. These are:

- the supply and demand of labour
- the business's ability to pay
- the prevailing minimum wage.

When employees are paid, there are also other aspects that the human resource manager should attend to. Not only the business but also the employees should be registered with the South African Revenue Service (SARS). Each employee must have a tax number. It is the employer's responsibility to deduct tax from the salaries of the employees and to pay this monthly to SARS. The amounts deducted must be according to tables obtained from SARS. At the end of the tax year (February 28), each employee must be issued with an IRP5 form. This is a summary of the employee's income and deductions for the past tax year.

According to the Department of Labour, a payslip must contain the following information:

- employer's name and address
- employee's name and occupation
- period for which payment is made
- total salary or wages
- any deductions
- the actual amount paid
- if relevant to the calculation of pay
  - employee's pay and overtime rates
  - number of ordinary and overtime hours worked
  - number of hours worked on a Sunday or public holiday
  - the total number of ordinary and overtime hours worked in the period of averaging if a collective agreement to average working time has been concluded.

Instead of making use of permanent employees, you might also use 'contractors' to get the job done. These workers do not work for a salary, but are contracted to do a certain job and then get paid for what they have done, similar to the piece-wage system. If they work more, they get paid more; if less, then they get paid less.

Let us assume that there is a need for a job to be done and the human resource manager decides to make use of contractors. Human resources must come to an agreement with the contractor about the job to be done and the amount to be paid for the job. Then a contract is drawn up; both parties must accept the contract and sign it together with two witnesses.

The contract must state the following:

- Details of service or product to be provided. This is the job that is expected of the contractor. Sometimes it is necessary to include a lot of detail so that both parties understand exactly what the contract entails.
- Machines, materials, stock and maintenance. It must be stated who will provide what, and the standards involved.
- Fee structure. The amount you will pay for the completed task, for each section or for specific services rendered.
- Dates of commencement and completion of the job.
- Breakdown or any other hold-up. Discuss the consequences and actions.
- Indemnity, guarantees, liability and insurance, any legalities, safety and security rules and regulations.

Contractors do not have the same rights and advantages as employees. For example, contractors cannot have paid leave, must pay their own medical aid fees and must cater for their own pension and insurance. Contractors work independently for themselves and are in no way part of the business for which the work is being done.

7.4.2 Labour relations

'Labour relations' is concerned with the creation, maintenance, amendment and administration of rules, control processes, ideologies, interactions and relationships in the workplace.

There are three participants to consider: labour, management and government. *Labour* is the human effort which is offered with the aim of acquiring an income. *Management* (in this case, the entrepreneur), firstly, aims to run the business profitably so that it can continue to exist and grow. The second function of management is to utilise the available production factors optimally. Special attention should be given to labour, which is usually the most important resource. The ability to control and utilise this resource will, to a large extent, determine the success of the business.

The role of *government* differs from country to country, depending on the prevailing socio-economic and political dispensation. The government's role includes providing the legislative framework for labour relations.

Important

The labour relations system is, therefore, a three-way relationship between labour, management and government. It is in the interests of both labour and management to strive for a climate free of conflict and to settle the conflicts that do arise themselves, in an orderly way, with the help of appropriate institutions.

In many cases, employees are members of a union, which is a permanent representation of employees in an industry, business or profession, established to regulate matters of economic interest by way of negotiations with management, so as to improve working conditions and general living standards.

Since a poor relationship with a union can cause much harm to a business, most employers conclude a *memorandum of recognition* with the unions. The memorandum includes provisions relating to grievance procedures, mediation, safety measures, use of noticeboards and the administration of the agreement. To make this agreement binding, it must comply with the common law requirements of a valid contract. The proposed provisions should not clash with labour legislation, otherwise the agreement becomes invalid. Recognition of a union implies an agreement, a relationship and a process.

It is essential to keep up to date with the relevant labour legislation, especially the issues contained in the Labour Relations Act. You can find all the details on the website of the Department of Labour: www.labour.gov.za/. Other information that you can find there includes forms, sample documents and guidelines covering many labour relations issues.

7.4.3 Personnel administration

The quality of decisions taken by management with regard to employees is dependent on the availability, completeness and accuracy of information pertaining to each person. The human resource division is responsible for thorough record-keeping of all relevant human resource data including age, qualifications, courses completed and each person's service record in the business, including promotions, merits and transfers. This data should be stored in such a way that it is quickly accessible when management makes decisions regarding promotions, transfers, rationalisation, training, development and other similar changes.

Larger businesses mostly use a computerised database for this function, but a filing system will work adequately in a small business.

Employees must be familiar with the policy of the business. In most businesses, this policy is contained in a personnel manual which is available to employees at all times. Details contained in the manual include conditions of service, leave codes, rights and privileges of employees and disciplinary and grievance procedures. Since we operate in such a dynamic environment, the manual needs to be kept updated.

It goes without saying that management must not deviate from what is contained in the manual. This could lead to conflict and unhappiness. Communication with employees is extremely important. In many cases, it is advantageous for the entrepreneur to discuss or negotiate any policy or other changes to the manual with employees *before* they are implemented.

7.4.4 Working conditions

It is essential that working conditions should be pleasant and safe before one can expect employees to be motivated and productive. Unsafe, unhygienic and unpleasant conditions may result in an employee being injured or becoming ill. The consequences of bad working conditions are usually greater absenteeism, a fall in productivity and a resultant drop in profits.

Accidents in the work situation can be caused by unsafe conditions and unsafe practices. These types of conditions and practices must be eliminated. The elimination of unsafe conditions should come first. Examples of unsafe conditions are unstable constructions, slippery and otherwise dangerous surfaces, overcrowding in workshops, a lack of protective clothing, inadequate ventilation and poor lighting in work areas. Although these conditions cause the smallest number of accidents, they are situations that can be remedied permanently and at relatively low cost. It is the entrepreneur's responsibility to ensure that the workplace is safe and hygienic, and that personnel use the right protective clothing and equipment.

Unsafe practices, on the other hand, are the result of human error and, as such, more difficult to change. It is mostly an attitude or disposition that has to change, and as you might know, this is not so easy. The entrepreneur should, therefore, first do everything possible to ensure that the working environment is safe before expecting personnel to work safely. Accidents caused by human error refer to unsafe acts (practices), while accidents resulting from technical failures refer to unsafe conditions. Examples of unsafe practices are working too fast, working without authorisation, sitting – or working – on moving equipment, taking chances/risks, moving in unsafe places and the refusal to wear protective clothing.

To prevent accidents, you have to know their causes. There are five basic causes, which are divided into the following two categories:

- **Personal factors:** Lack of knowledge and/or skills; physical or psychological distractions; incorrect attitude or motivation.
- **Work factors:** Unsafe conditions and physical environment; inadequate working standards.

Entrepreneurs must exercise constant control over employees to ensure that the above factors do not arise. It is important to be constantly on the lookout for anything that might cause an accident. As far as safety is concerned, it is vital to take preventive action at all times.

There are various ways in which one can help ensure that employees remain healthy and productive, for example:

- a clean workplace, recreation room and cloakroom
- sufficient leave, acceptable working hours and little or no overexertion
- first-aid provision in case of an accident or illness
- a suitable and pleasant workplace
- ergonomically designed office equipment, especially the desk and chair
- sufficient lighting that eliminates reflection and, where possible, uses natural daylight regulated by means of blinds
- limiting noise – and noise intensity – by isolating machines and pipes, making use of carpeted and cork floors and/or acoustic tiles
- temperature regulation by air conditioning, especially where large fluctuations occur, as excessive heat results in discomfort and fatigue.

With regard to certain of these factors, entrepreneurs are compelled by law to provide such an environment. You would be well advised to read the Occupational Health and Safety Act 85 of 1993 to ensure that your business does indeed comply. A business cannot afford to neglect the maintenance of its most important resource – the human resource.

There are many other human resource issues related to Basic Conditions of Employment, such as the Unemployment Insurance Fund (UIF), for example. If you wish to know more about these, you should visit the Department of Labour website (www.labour.gov.za/) to get the latest information. There you will find information on everything that you need. The following section outlines some of the issues and subjects discussed and explained on the website.

General issues

- **Basic Conditions of Employment:** This applies to all employers and workers, and regulates employment conditions, such as leave, working hours (ordinary, Sundays and public holidays), employment contracts, employee records, deductions, payslips, overtime and termination.
- **Compensation for Occupational Injuries and Diseases:** This Act provides for, and deals with, injuries, disablement, disease or death caused by work-related activities.
- **Employment Equity:** This Act aims to promote and achieve equality in the workplace by encouraging equal opportunity for all workers.
- **Labour Market Research and Statistics:** The Department of Labour has identified the need to develop an ability to collect, process, analyse and publish labour-market information and statistics in a manner that will report on how effectively the Department is delivering its services.
- **Labour Relations:** Aims to support labour peace, democracy and worker participation in decision making in the workplace.
- **Occupational Health and Safety:** Provides measures to ensure the health and safety of all workers in the workplace.
- **Skills Development:** Aims to promote the development of skills in the South African workforce.
- **Unemployment Insurance Fund (UIF):** Provides funds to workers who may become unemployed.

Subjects

- **Maternity benefits:** This is a basic guide to maternity issues, such as maternity benefits, leave and application procedures.
- **Registration:** This gives you guidance on, among other things, how to register for the Skills Development Levy, as a trade union and for UIF. The forms for these registrations are also found on the website.
- **Payslips:** Explains everything you need to know about payslips.
- **Annual leave:** All the information that you need to know about annual leave for the different sectors in the economy.
- **Accidents:** All accident issues, such as compensation for injuries and diseases, as well as a guide to claiming for injuries.

The Department of Labour website also provides information on labour legislation and information relevant to a specific industry, sector or interest group, such as domestic workers, employees, employers or bargaining councils, as well as the forms and sample documents that you might need.

7.5 Summary

As an entrepreneur, if you own a small business, numerous staff matters require your attention. The fewer employees you have, the easier it should be to handle these issues. As your business grows and you need to appoint a lot of people, it is advisable to get assistance from a human resource specialist.

The aim of the human resource function in a business is not only to recruit, select and employ suitable staff; it is also to develop, train and, in some cases, educate existing staff, so that employees are utilised to their full potential.

The employment process costs money, requires human resource and takes up a lot of time. It is, therefore, essential that the staff of the business are well looked after. The personnel are indeed the most important production factor in the business and a high staff turnover is very harmful for any business in terms of costs and continuity.

The activities of the human resource division are not always quantifiable, but, as you saw in this chapter, they are in no way inferior to the other functions of the business.

Questions for self-evaluation

1. 'The human resource function is one of the eight functions found in most businesses.' Discuss this statement and indicate briefly for which tasks the human resource manager is responsible.
2. Write a job description for a human resource manager, or for your own position.
3. You need a person to manage the finance function of your small business. You need to fill the post with the most suitable person. Create an advertisement for the position and explain, step by step, what you will do to fill the position.
4. Draw up an orientation programme for the new financial manager using the following headings:
   - The week before the newcomer arrives
   - The first day at work
   - The first week in the post
5. 'Training and development are necessary only for the employees at the lowest levels of a business.' Discuss this statement critically.
6. Explain what is meant by 'human resource maintenance' and discuss its effects on the productivity of a business.

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Legislation

Basic Conditions of Employment Act 75 of 1997

Employment Equity Act 55 of 1998

Labour Relations Act 66 of 1995

Occupational Health and Safety Act 85 of 1993

Information management

8 CHAPTER

Learning outcomes

After studying this chapter, you should be able to:

- explain the nature of information
- explain the difference between data and information
- identify and describe the stages of processing
- differentiate between the different information needs of top-, middle- and lower-level management
- explain the different types of internal and external information needed by functional managers
- explain the six basic components of an information system
- identify and explain the various types of information systems in a business
- explain the concept of knowledge management
- indicate why knowledge management is beneficial for a business.

8.1 Introduction

The entrepreneur must have usable information in order to make good decisions. No business can be managed without timely, relevant and accurate information. It is also impossible to manage and make decisions if only data – and not information – is available. The information management function plays an important role in this regard, since it is concerned mainly with the provision of usable information. The information management function is responsible for the orderly collection, processing, retrieval, distribution and storage of information in a business.

The information management function renders a service to the other enterprise functions, such as the human resources, financial and marketing functions, by supplying information to enable decisions to be made.

Never before have entrepreneurs had so much information at their disposal to support their activities. Furthermore, most would agree that the effectiveness with which information is managed determines its usefulness. The information management function is able to make a significant contribution to the success of the business through the provision of specialised support in the management of information.

It is very important for entrepreneurs to keep up with technological developments in this field, which largely account for the considerable increase in the quantity of information available to them. Technology not only creates a large volume of new information, but also makes existing information more readily available, accessible and convenient to use. An example is the development of computer software packages that are continuously improved to permit faster and better processing of information.

Information systems comprise groups of people, procedures and resources that collect, transform and distribute information in a business. There are manual (paper and pencil), informal (oral) and computer-based (IT) information systems.

In this chapter, we will be looking at the nature of information management, which includes the information needs of a business, the components of information systems, the various types of information systems, knowledge management and telecommunications. All of these play an important part in the daily information management process.

8.2 The nature of information

Incomplete or insufficient information is often the cause of wrong decisions being made and this can lead to loss of money, time and labour, and at worst the failure of a business. The provision of the right information at the right time and in the right form is essential for the survival and success of a business. Before we can have usable information, we have to process the available data. You have probably wondered whether there is a difference between *data* and *information*.

Definitions

Data relates to facts in an unprocessed form. It cannot be used in the decision-making process in that form; for example, this could be a pile of invoices of all sales for the year, or a list of employees' salaries.

Information refers to data that has been processed so as to be usable in a specific situation, for example the invoices could be arranged in chronological order, or a comparison made between the number of products sold in the last month with the figures for the same month the previous year.

The list of employees' salaries referred to in the definition could become information if we could deduce that the average wage per hour is, eg R300 for sales representatives and R500 for managers, or if the salaries per position are compared to the previous two years' salaries.

But when does this information become knowledge? Knowledge refers to the skills, experience and expertise combined with information and intelligence, that comprise a person's intellectual resources. Thus if we take our example of the pile of invoices from this year's sales (data), compared to the previous year's sales (information) we can deduce that sales decreased by 10% and that the poorest seller was product A. The decrease in sales was mostly due to the economic recession in the country.

We can thus conclude by saying that information processed from data is made more useful through the application of knowledge.

Look at the example below illustrating data, information and knowledge.

Example

At the end of each week a hair salon captures details of all the clients that visited the salon that week, noting the treatments that they received (DATA). If the hair salon captures this data every week and they compare it monthly and also annually to determine certain trends, it becomes INFORMATION. When the owner of the hair salon interprets this information she can determine that in her experience more clients visit the salon towards the end of the month and during the festive season. She also knows that during these times the clients are more willing to buy salon products because they have more money available to spend on them (KNOWLEDGE).

If the entrepreneur (hair salon owner) wants to determine how many items of a specific hair product are sold at a particular time of year, she will have to develop a simple system for herself. For example, she could attach a code to each item and enter it into the cash register before entering the price. This action could also be done automatically via a computerised system.

A system consists of various components that work together to achieve a common goal by accepting inputs, processing them and producing outputs in an organised manner. The input to a system can be thought of as the raw material for a process that will produce a particular output. Input is the activity of gathering and capturing raw data. Examples of inputs include data, knowledge, raw materials, machinery and premises. Inputs are turned into outputs through a transformation or processing. Processing means converting or transforming data into useful outputs. Making calculations, comparing data and taking alternative actions, as well as the storing of data for future use forms part of processing. The output is the finished product or service created by the system. Again, the outputs produced by a system can take many forms, such as information, products or services. A simple example to illustrate this process is shown in Figure 8.1.

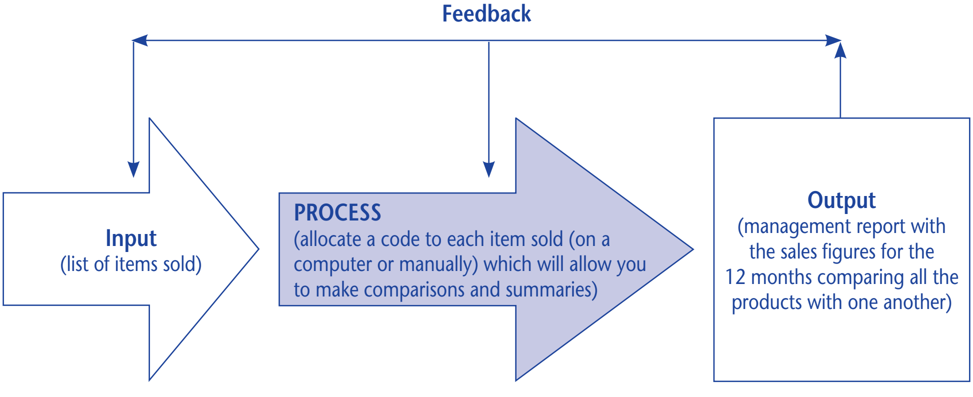

Figure 8.1: Illustration of inputs processed into outputs

Figure 8.1 also indicates the very important aspect of feedback, that is sometimes ignored in a system. Feedback refers to information from the system that is used to make changes to input or processing activities. For example if the list of sales were captured incorrectly, it could have an effect on how the figures are interpreted and presented.

Table 8.1 gives examples of inputs processed into outputs from functional management processes in a business:

Table 8.1: Examples of inputs processed into outputs

Inputs	Functional process	Outputs
Bill of materials Supplier information Quotes Orders	Inbound logistics	Delivery notes Invoices Inventory lists Warehousing schedules

Market research Forecasts Competitive intelligence Budgets	Marketing and sales	Marketing strategies Sales plans Promotional plans Public relations events
Advertising of vacancies Shortlisted candidates Interview findings Personal information	Human resource management	Letters of appointment Job descriptions Salary slips Medical aid benefits
Hardware specifications Software installation User manuals	Information technology	Asset management Depreciation End-user training

Source: Nieman & Bennet (2006)

8.2.1 The stages of processing

Table 8.2 shows the stages of processing information (data) which consist of collecting, processing, storage, retrieval, distribution and discarding.

Table 8.2: The stages of data processing

Collection of data → **Processing of data** → **Storage and retrieval of data** → **Distribution of information** → **Discarding of information**

Collection of data

A business can collect data from inside the business (internal data) or from outside it (external data). The business has no control over the format and type of data available from outside the business. Data from inside the business can be collected in specific forms, because you have control of the processes inside the business. A business requires information on all aspects that affect it.

When collecting data, there are three aspects to consider:

- **Activities for which data must be collected:** The entrepreneur must decide for which activities it is necessary to collect data. These may include recording sales transactions, payments made and products produced.
- **The format in which to collect data** can be recorded in a systematic way on predesigned forms. Normally, a data collection form would include the following:
  - name and number of the form
  - purpose of the form
  - the details that are needed and the order in which the data must be captured

- quality and colours used for the form
- ample writing space.

- **Methods of collecting data:** Data can be collected manually (by hand) or electronically (by computer or machine). For example, if you keep a record on predesigned cards of all the products sold, then the method of collecting data is manual. If the cash register is linked to a computer, it will automatically record the quantity of products sold. This method is electronic.

Processing of data

Before the data can be processed it must first be made usable. It is, therefore, necessary to classify, group and sort the data.

Classification consists of arranging the data according to a specified characteristic in order to place it in meaningful groups. For example, you can collect the purchasing invoices and then classify sales according to region or salesperson. Sorting refers to arranging the data in some way, such as placing invoices in sequence by date or number.

Data can be processed mechanically – for example, by a computer – or it can be processed by hand.

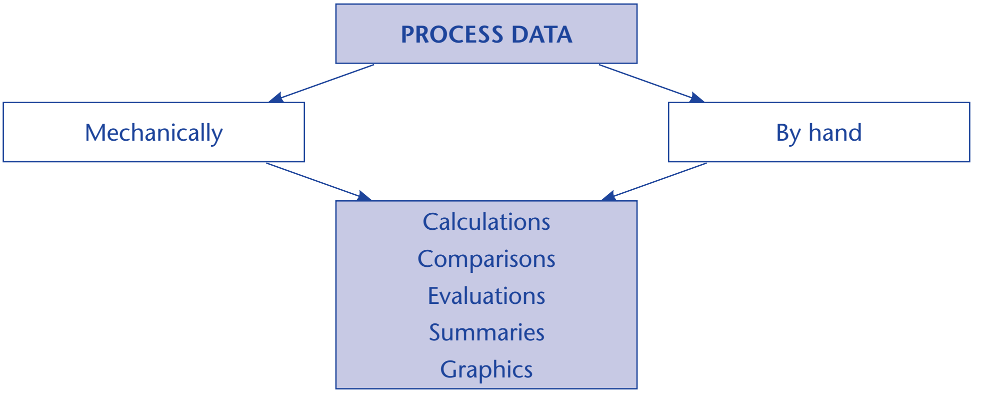

Figure 8.2: How data can be processed

Data can be processed by making calculations, drawing comparisons, doing evaluations, making summaries and also by creating graphics or charts. Calculations are made using mathematical principles. To give an employee a monthly payslip, for example, an entrepreneur must multiply the employee's wage rate by the number of days worked, minus tax and other deductions. Comparisons are done, for example, by comparing the stock levels and order quantity of a certain item with another.

Example

Consider the following example of an information processing system. Assume an entrepreneur who owns a liquor store wants to know how much stock he has of a specific wine. For this he will use a computer. The stock quantities of all the wines are available on the computer, because the liquor store entrepreneur enters this information on the computer each month (that is the ***input***).

He selects the wine he is looking for, and the computer searches for the information in its memory (***processing***).

After a few seconds, the available stock requested by the entrepreneur appears on the computer screen (***output***).

After the entrepreneur has seen the quantity of available stock, the computer stores the information on its hard drive (***storage***). At the end of each transaction, the information is updated on the hard drive so it is always up to date.

Storing and retrieving data

Information can be stored for long or short periods, manually or electronically. Information that is stored manually is usually held in files specially designed to store hard copies of documents and these are stored in cabinets or on shelves. Information stored electronically is usually held in a computer system. In all instances, a filing system is necessary to be able to locate the information when it is needed. Fixed rules should be developed to guide the naming and filing of documents, because otherwise it will be very difficult to retrieve them.

A record that has been efficiently created and stored is of little value unless it can be retrieved when needed. Retrieving data is the process of locating the stored information. In a manual system, you would get the information from the shelf, cabinet or file where you stored it. In an electronic system, you retrieve the information from the computer's drive or disk where you saved it.

Distributing information

Data that has been processed into information must now be made available to the people who will use it. Information can be distributed in many ways; for example by telephone, by talking face-to-face with a person, by letters, reports or electronically. Note that examples of information products include the budget and financial statements.

Discarding information

Discarding, or throwing away information means the deliberate destruction of documents or files that no longer have any value to the users. Documents can be destroyed manually by throwing them into a waste bin, by shredding them or by burning them. In an electronic system, information is deleted from the computer.

Before you destroy any information, you must determine what the retention obligations are. For example, you may not require your financial statements any more, but the law determines that financial records must be kept for a certain period of time.

The following are normal suggested time periods for the retention of records:

- one year: all correspondence (eg unsuccessful job applications)
- five years: salary adjustment schedules, industrial training records, tax receipts, guarantee documents
- six years: cancelled cheques, contracts with clients and suppliers
- seven years: all human resource records
- ten years: tax receipts sent in by stockbrokers
- twelve years: share transactions from listed companies
- fifteen years: accounting records and registers
- indeterminable period of time: permanent registration documents, personnel records of senior members of staff.

Look at the following example that illustrates the five steps of information management in a business:

Example

Fashion Designs is a retailer selling fashionable clothes which employs 20 people. Fashion Designs has recently invested in a computerised payroll software package. To enable them to produce employees' pay cheques every month certain **DATA** needs to be **COLLECTED,** eg personal details of employees, employee numbers, total hours worked, rates per hour, overtime worked and overtime rates. All this data is captured in the new computerised software package. This data must be **PROCESSED** in order to be usable. The new computerised software payroll package will process the data so the pay cheques (**OUTPUT**) can be calculated, printed and paid electronically. All this information can be **STORED** electronically on the computer. If Fashion Designs did not have an electronic system this information would have been stored manually in a filing cabinet.

The computerised software payroll package will allow Fashion Designs to retrieve information whenever it is needed. The human resource (HR) manager would be able to draw information on each employee's hours worked, status and what they earned each month. The HR manager will also be able to see how much each employee was paid, when they took leave and how many hours of overtime they worked. This information can be made available in a report format (**DISTRIBUTED**). If Fashion Designs doesn't need this information after several years, it can be **DISCARDED** electronically by deleting it from the computer.

8.3 The information needs of a business

Businesses have different goals and products and therefore entrepreneurs have different needs for information. The information needs also differ between the various management levels. Then there are also external role-players who need information. When developing an information management strategy within a business, it is useful to consider information needs from all levels, that is, internally as well as externally. All these information needs must be analysed and the relevant information incorporated in the decision-making process.

The information required on each management level and in each function of the business will differ and this is determined by the types of decisions that have to be taken and how quickly that needs to be done.

Figure 8.3 overleaf indicates the three main management levels in a business with their key responsibilities. Different kinds of information are necessary to act on these responsibilities.

Information flows vertically and horizontally within the business to facilitate decision making.

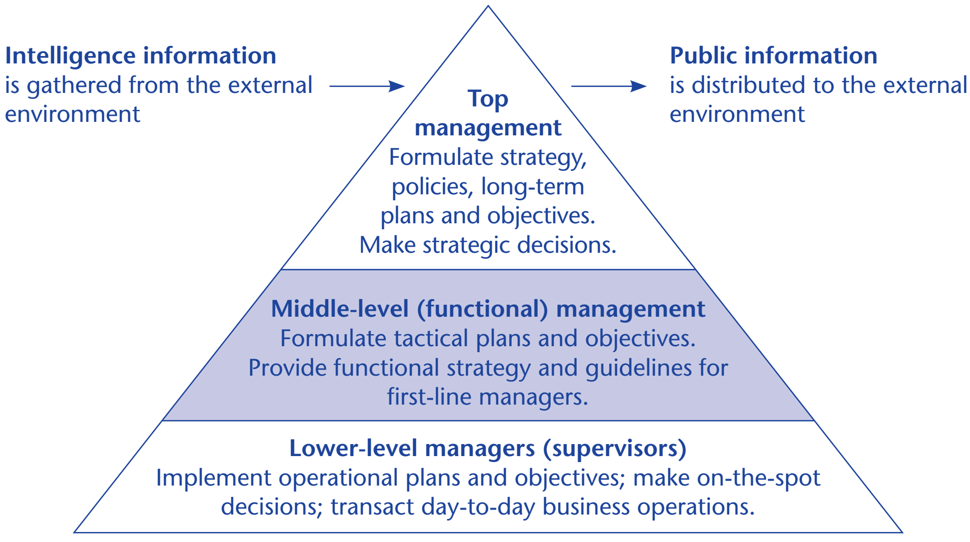

Figure 8.3: External and internal information needs of a business

Source: Ferreira et al (2014)

8.3.1 Information needs of top management

Top management, the level at which the entrepreneur is involved, make decisions that affect the entire business, which has an impact in the long term. Such decisions may include merging with or acquiring other businesses, opening branches overseas, developing a completely new product or service, moving operations to the internet or recommending a major restructuring of the business. Furthermore, top management relies on direct information to look at changing consumer patterns, the trends of income and expenditure involved in product lines and the impact of new technology, population and other special trends. This information enables top management to make strategic decisions, including counteracting any activity from competitors that could affect the business negatively. With all this external information in place, they can then look internally and decide whether the business is properly aligned to face the future.

8.3.2 Information needs of middle managers

Middle managers, also known as functional managers, receive general directions and goals made by top management. They need information to enable them to assist top management in the planning, development and implementation of policies and to manage their individual departments effectively. Examples of the types of information middle managers need are shown in Table 8.3.

Table 8.3: Examples of information needed by functional managers

Function	External information	Internal information
Marketing	• Clients and potential clients: number, tastes, preferences, opinions, expenditure ability, geographical situation, markets, market sectors and needs • Competitors: their products, prices, marketing communication	• Strategies of top management • The products/services and their characteristics • Budgeted and actual sales quantities • Marketing costs
Purchasing (supply chain)	• Everything about existing and potential suppliers • Quality and prices of raw materials and equipment • Acquisition costs • Quality and availability of other similar products	• Stock levels • Rate of consumption • Production quantities • Machine utilisation
Operations	• Suppliers and potential suppliers • Different materials and products available for production and their prices	• Budgeted and actual production quantities • Production costs • The application of equipment and staff • Stock quantities required and stock quantities available
Human resources (HR)	• Alternative sources of HR requirements • Relevant labour regulations and Acts • Trends regarding all facets of the labour force • Salaries paid in businesses in the same industry	• Staff requirements • Leave • Salary scales • Conditions of employment • Training statistics • HR needs in other functions • Merit assessment results • Training needs
Finance	• Capital sources and interest rates • Capital movement • Investment opportunities • Creditors and debtors	• Stock levels • Turnover • Information to calculate the financial ratios to ensure sound financial management
Public relations	• Interest groups • The image of the business	• Products and strategies of the business to enable them to project the correct image

Source: Ferreira et al (2014)

8.3.3 Information needs of lower-level managers/ supervisors

Lower-level managers, or supervisors, need information to enable them to function on a day-to-day basis in order to control the daily operations. Gantt charts, predetermined schedules, feedback from supervisors and budgets are useful sources of this information. The lower-level managers are able to make decisions based on this information.

The relevant information is also given to senior/middle management on a weekly or monthly basis as feedback regarding production, work processes and productivity.

8.4 Information systems

Information is the second most important resource (after the human element) in any business. Timely, relevant and accurate information is a critical tool for enhancing a business's competitive position in the marketplace and to manage all the business's resources. Information systems are developed to manage these resources. Computer-based information systems generate most of the information we use in businesses and are essential for successful business operations. Information systems broadly support businesses on three levels; in the formulation and achievement of the strategic objectives of the business, in the management of needs and in general business operations.

Information systems must be managed properly as these contribute to the replacement of diverse manual systems, thus saving time and money whilst gaining efficiency. Using information management systems will relieve management of time-consuming administrative tasks and allow them time to concentrate on the work they are supposed to do; to manage the business.

An information system can be defined as an integrated person/machine unit with a set of interrelated components working together to collect, process, store, retrieve and disseminate information. This achieves the common purpose of supplying information timeously, accurately and in an appropriate format to the decision-makers concerned, facilitating business operations, management functions and strategic advantage in business.

The various stages in which information is processed were discussed in Section 8.2.1.

The aim of information systems must always be to support management in achieving the objectives of the business. This implies that information systems cannot be isolated or separated from the human factor or the business environment, but they will rest on three pillars: management principles, the business environment and the managerial application of technology to the advantage of the business.

In the following sections we will first look at the components of information systems, and then at the various types of information systems in a business.

8.5 Components of information systems

Information systems consist of six basic components that work together to collect, manipulate, store and process data into information. These six basic components are hardware, software, data resources, telecommunications, people and procedures. We will now look at each of these components in more detail.

8.5.1 Hardware

Hardware, in computer terms, refers to the physical components of the computer used to perform input, processing, storage and output activities. Regardless of size, age, function or capability, all computers have the same basic components and operate according to the same basic principles. A computer must handle four operations: (1) accept data, (2) store data and instructions, (3) process data, and (4) output data and/or information.

The physical hardware devices associated with a computer system are as follows:

- Central processing unit (CPU) is the actual hardware that interprets and executes the various program instructions. The CPU coordinates all the other hardware devices.
- Storage devices. Information can be stored on the computer's main memory. That consists of the random access memory (RAM), the cache memory, and the read-only memory (ROM) that is directly accessible to the CPU. Information can also be stored on external equipment such as diskettes, CDs, DVDs, external hard drives or memory sticks.
- Input devices are used to capture information and commands. Here we distinguish between manual input devices and automated input devices. Manual input devices are keyboards, mice and pointing devices, touch pads, touch screens and game controllers. Automated input devices are image-, bar code- and biometric scanners, optical mark- and optical character readers, digital still- and digital video cameras, webcams, microphones and point-of-sale terminals.
- Output devices are used to see, hear or accept the results of the information processing requests, such as monitors, printers, or speakers.

- Communication devices are used to send information and retrieve it from one location to another, for example a modem or a wireless card.

Computers are available in different sizes, colours and shapes. The size of the computer does not always correlate with the power, speed and price. Computers can broadly be categorised as follows:

- Smartphone – a cellular phone, like an iPhone or a Samsung Galaxy that has a keypad that amongst other features runs programs, music, photos and emails.
- Personal digital assistant (PDA) – simple tasks such as note-taking, scheduling appointments, maintaining an address book and a calendar can be done on a PDA – a small handheld computer.
- Handheld – portable computer that can fit into a handbag or pocket and has its own power source or battery.
- Laptop – a portable computer that fits on a lap or in a bag. It also has its own power source or battery. Laptops come equipped with all of the technology that a personal desktop computer has.
- Tablet – this is a computer with a flat screen that uses a mouse or fingertip for input instead of a keyboard. Tablets use a writing pen or stylus to write notes on the screen and touch the screen to perform functions.
- Personal computer (microcomputer) – this is a computer that is operated by a single user who can customise the functions to match personal preferences.
- Desktop – this is a computer that is too large to be carried around and sits on a user's desk.
- Workstation – this is similar to a desktop but has more powerful mathematical and graphics processing capabilities and can perform more complicated tasks in less time. Workstations are typically used by software and web developers, or people who use engineering and e-business tools.
- Minicomputer (server) – this is designed to meet the computing needs of several people simultaneously in a small- to medium-sized business environment. This server is used for managing internal business applications, networks and websites.
- Mainframe – this is designed to meet the computing needs of hundreds of people in a large business environment.
- Supercomputers are the fastest, most powerful and most expensive type of computers. Organisations that are heavily involved with research and 'number crunching' (eg NASA) will use supercomputers because of the speed with which they can process information. Big organisations use supercomputers to handle customer information and transaction processing.

As an entrepreneur and small business owner you will have to decide which of these computers will best suit the needs of your business.

Source: Oz & Jones (2008)

8.5.2 Software

According to Oz & Jones (2008) *software* refers to the sets of instructions that direct the hardware to perform particular tasks. The generic concept of software includes not only the sets of operating instructions called programs, which direct and control computer hardware, but also sets of information processing instructions called procedures. Word processors, electronic spreadsheets, web browsers, project management tools and collaborative work programs are all examples of software that runs on computers, enabling workers to produce more products and services in a given period of time.

There are typically two major categories of software: *application software* and *system software*.

An application is a program developed to address a specific need, for example Microsoft Office Application software enables users to complete a particular application or task, such as word processing, investment analysis, data manipulation, work scheduling, project management, desktop publishing, email, groupware and spreadsheets. An application can also be software that lets non-programmers develop such programs.

System software, such as Microsoft Windows, enables application software to run on a computer and manages the interaction between the central processing unit (CPU), memory, storage, input/output devices and other components. The purpose of system software is to manage computer resources and perform routine tasks that are not specific to any application, such as the interface between user and computer, loading a file, copying a file or deleting a file, as well as managing memory resources and operating peripheral equipment such as monitors and printers. Other examples of operating system software are Linux, Mac OS X, MS DOS and UNIX.

On the one hand, system software is developed to work in partnership with as many applications as possible; on the other hand, applications can work with system software only if they are developed to be compatible with that software.

It is very important that the entrepreneur first consider software, not hardware, to assist in the business processes. Businesses must consider the tasks they want to support and the decisions they will have to make, and therefore the information they need to produce. In this regard, businesses should look for the proper software first, and only then purchase the most appropriate hardware on which this software can run. Unfortunately, in a great majority of cases businesses already have a significant investment in hardware, and must often then consider adopting new software within the constraints of their existing hardware.

8.5.3 Database

The basis of data management is the *database*, a collection of related data files that hold data in a structured format. Typically a business's database will contain facts and information on its customers, inventory, employees, sales and much more. The data is organised to appear to be in one location so that it can be accessed and used in various different applications. For example, data about sales transactions can be accumulated, processed and stored in a web-enabled sales database that can be accessed by managers for sales analysis reports.

Data can be stored in large data centres, within computers of all sizes, on the internet and in smartphones and small computing devices. One of the biggest concerns that businesses face is how to keep the databases secure and safe from outside individuals and groups.

8.5.4 Telecommunications and networks

Telecommunications refers to the electronic transmission of signals for communications. This enables businesses to conduct their processes and tasks through effective computer networks. Business telecommunications make it possible for employees, customers and suppliers to communicate whenever necessary to accomplish their work. Telecommunications can take place through wired, wireless and satellite transmissions. Entrepreneurs are faced with decisions about selecting telecommunications technologies and services to enhance the performance of their businesses and how best to incorporate them into their information systems. A telecommunications system can transmit text, graphic images, voice and video information.

Networks connect computers and equipment in a building, around the country or around the world, to enable electronic communications. The internet is the world's largest and most widely used network. The internet is a network of networks that uses universal standards to connect millions of different networks around the world.

We will now clarify some of the aspects related to telecommunications and networks that are necessary for an entrepreneur to be aware of.

The telephone

The telephone is, perhaps, the most important piece of business equipment. Businesses use telephones to make cold calls, sell products, provide customer service and negotiate contracts.

The volume of telephone calls will determine the kind and size of system needed. A small business may have only one telephone with one local line. As the business expands, however, it will need more telephones and a greater number of lines, which requires a larger system.

Depending on your needs, a wide range of services and features can be added and adapted to a business telephone system.

Smartphones

A smartphone, like an Apple iPhone, Blackberry Torch or Samsung Galaxy, combines the functionality of a mobile phone, camera, web browser, email tool, MP3 player and other devices into a single handheld device. Entrepreneurs with a very small business might sometimes use their smartphones to do most of their business transactions as they do not yet need a more advanced means of telecommunication.

Faxes

A fax machine scans and digitises words and images on a page and transmits them in analogue form over a regular phone line to another fax machine, which then reproduces a copy – or facsimile – of the image. Alternatively, you can send and receive faxes from your computer to another computer or fax machine. If the document you wish to send is not one that you created on your computer, you can first scan it into your system with an image scanner.

A desktop fax unit links into a telephone and allows the user to feed hard copies of documents through the machine for transmission to another fax machine. Computer fax modems can send an electronic version of a document to another computer or to a stand-alone fax machine. Certain software packages allow users to create a document on a personal computer and automatically fax it to various locations. Fax machines offer immediate transmission, allowing a business to respond quickly to requests, send orders to suppliers, and so forth.

Voicemail

Telephone answering devices are the simplest and least expensive form of voicemail, although voicemail systems have many additional features. A major difference between an answering device and voicemail is that with the latter the user can plan to leave a voice message rather than speak directly to a person by telephone. Voice messages are somewhat like letters in that one does not get an immediate response.

Like written messages sent by electronic mail, voice messages are deposited in ‘mailboxes’. The same message can be ‘broadcast’ to numerous mailboxes simultaneously.

Voicemail can conveniently replace short, routine letters, such as requests, replies to requests, notices or announcements. Voicemail messages are useful in replacing telephone calls which do not require an immediate response. Some systems even provide a way to tie the system to the employee’s pager, a small radio receiver that signals to the employee that they have a message.

Another feature of voicemail is that it provides information to enquiries for those who do not use a computer, but only a touch-tone telephone. Banks, for example, provide information about account balances or whether a cheque has been cleared. This information is provided by voicemail, although the enquirer has the option of being transferred to a customer service representative.

Conferencing

Teleconferencing

Teleconferencing is electronic communication between two or more people in separate locations. In its simplest form, it is the telephone conference call that has been available for many years. With speakerphones in each office, the number of participants can be greatly increased. When using two-way calls, all participants can speak to all the other participants. In one-way conference calls, oral messages (for example, statements from an entrepreneur) are delivered simultaneously to several locations.

Data conferencing

With data conferencing, users at distant locations are able to edit and modify data. This can be text, such as word processing documents, or numeric data such as spreadsheets and graphic files.

Video conferencing

Video conferencing takes place over telecommunications links and includes televised pictures of the participants, either as still shots or in full action, like regular television. Video conferencing can be either one-way or two-way, with several variations of each. A frequently used method, particularly appropriate for large groups, is a video presentation of the speaker or speakers, with the opportunity for telephone feedback from audiences in different locations.

Many entrepreneurs spend a large portion of their time in meetings. Because of increasing travel costs, some businesses hold meetings, either nationwide or globally, by using video conferencing. Besides the cost factor, an advantage is that more employees are able to participate. A disadvantage is that video conferencing and teleconferencing at their best cannot take the place of face-to-face interaction: it is human nature to wish to talk to, and interact with other people directly.

The internet

With the internet, communication can take place internally in the business by means of an intranet and externally by means of an extranet.

Intranets are used to facilitate communication within a business and to manage many internal business processes. Intranets give businesses the capacity to provide just-in-time information to any part of the business. In addition, intranets act as a resource to employees, who can download the documents and forms used in the business, check the schedules for projects, read updated information about the business and find links to useful websites.

An *extranet* sets up communication channels between the business and its customers and suppliers, usually on a more 'selective' basis than an internet site. Extranets tend to be used for business-to-business communications and transactions such as sharing product and inventory information.

Electronic mail (email)

Email is one of the most effective ways of communicating quickly with other people in a business.

In addition to making communication easier and more efficient, email can significantly reduce telephone bills, the cost of postage and secretarial costs. As a result, email has become the preferred method of communication for many businesses.

Wireless transmission

Wireless transmission sends signals through air or space without being tied to a physical line. An antenna attached to the device (whether it be a telephone or a local area network device) enables it to send and receive signals. Today, common technologies using wireless data transmission include pagers, cellular telephones, personal communication services, smartphones, personal digital assistants and mobile data networks.

Paging system

This is a wireless transmission technology in which a small device called a pager beeps when the user receives a message; it is used to transmit short alphanumeric messages. Paging is useful for communicating with mobile workers, such as repair crews.

Cellular phones

Cellular phones work by using radio waves to communicate with radio antennae placed in adjacent geographic areas called cells. A telephone message is transmitted to the local cell by the cellular telephone and then passed from antenna to antenna (cell to cell) until it reaches the cell of its destination, where it is transmitted to the receiving telephone. As a cellular signal travels from one cell to another, a computer that monitors signals from the cells switches the conversation to a radio channel assigned to the next cell.

Personal communication services

Personal communication services (PCS) are a popular type of digital cellular service. A PCS is a wireless cellular technology that uses lower power, higher frequency radio waves than cellular technology and so can be used with smaller telephones. Newer models of digital cellular phones can handle voicemail, email and faxes, save addresses, access a private corporate network and access information from the internet, as well as provide wireless voice transmission. These are also known as 'smartphones' and are being equipped with web browser software that lets digital cellular phones or other wireless devices access web pages formatted to send text, or other information suitable for very small screens.

Personal digital assistants

Personal digital assistants (PDAs) are small, handheld computers capable of entirely digital communication transmission. They have built-in wireless telecommunications capabilities, as well as work-organisation software. A PDA can send and receive email messages and provide access to the internet. The devices include such applications as an electronic scheduler, address book and expense tracker, and can accept data entered with a special stylus through an on-screen writing pad.

Bluetooth

Bluetooth is another wireless networking standard that is useful primarily for creating small personal area networks linking up to eight devices within a 10 square metre area using low-power, radio-based communication. Wireless phones, pagers, computers, printers and computing devices can communicate with each other and operate each other without direct user intervention.

Instant messaging

This is a method that allows two or more people to communicate online in real time using the internet. Instant messaging allows the participants to buddy lists or contact lists which shows them the contacts that are logged on the internet and available to chat.

Blogging

Blogging allows individuals to write commentaries or opinions on any interesting topic on their website so that others can read it. Blogs are updated regularly and allow others to leave comments. Microblogging, like Twitter, is a web application that allows members to report on what they are doing throughout the day. Users can send short text updates from a cellphone or a web account to their followers. Businesses are finding value from this service to stay in close touch with their associates by sharing their location and activities throughout the day. Twitter has become very powerful for businesses as it is a rich source of consumer sentiment that can be tapped into to improve their marketing, customer relations and product development.

Cloud computing

According to O'Brien (2004) cloud computing offers new ways to store, access, process and analyse information and connect people and resources from any location in the world where an internet connection is available. Users connect to the cloud from their personal computers or portable devices using a client (a web browser). It is almost like storing all your software and documents in the cloud. All you need is a device to access the cloud. The benefit of cloud computing, specifically for small and medium-sized businesses is that no hard drive, software or processing power is needed as that is all located in the cloud. Your hard drive is located in the sky and your information and programs can be accessed using any device from wherever you are. The biggest advantage of cloud computing is that whenever your machine crashes, is lost or stolen, the information hosted in the cloud is safe and always available.

8.5.5 People

People are required for the operation of all information systems in a business. We can divide people resources into two groups, namely, users and information systems professionals.

Users (also called end users or clients) are people who use information, for example accountants, salespeople, engineers and managers.

Information system professionals are people who develop, operate and maintain information systems, for example system analysts, programmers, computer operators and diverse managerial, technical and clerical information systems staff.

8.5.6 Procedures

Computer-based information systems need strategies, policies, methods and rules to assist with their operation, maintenance and security. These are referred to as procedures. For example, procedures would stipulate who has access to the information system and when each program should run.

8.6 Types of information system

There are many types of information system; for different types of business, for different functions within a business, for different business needs and at different management levels of a business. Laudon and Laudon (2012) identify four major types of information systems: transaction processing systems (TPSs); decision support systems (DSSs); management information systems (MISs) and executive support systems (ESSs).

Transaction processing systems (TPSs) are the basic business systems, which serve the operational level of the business. The TPS records the daily transactions necessary to conduct business, for example sales order entry, quality control, accounts payable/receivable and employee records. A typical example of a TPS is the purchase of petrol at a petrol station using a garage card. The purchase is recorded at the petrol company and later at the credit card processing bank. After this data is collected, the information system automatically processes it immediately or stores it for later access on demand.

A **decision support system** (DSS) is designed for the management level of the business. A DSS helps entrepreneurs make decisions that are unique, rapidly changing and not easily specified in advance. The DSS helps find the best course of action and answers 'what if?' questions; for example, 'What if we purchase raw materials overseas?' DSSs are programmed to process raw data, make comparisons and generate information to help entrepreneurs glean the best when faced with the need to make decisions.

Management information systems (MISs) also serve the management level, providing entrepreneurs with reports and, often, online access to the business's current performance and historical records. The MIS primarily serves the functions of planning, organising, leading and control at the management level. Generally, it depends on underlying transaction processing systems for its data.

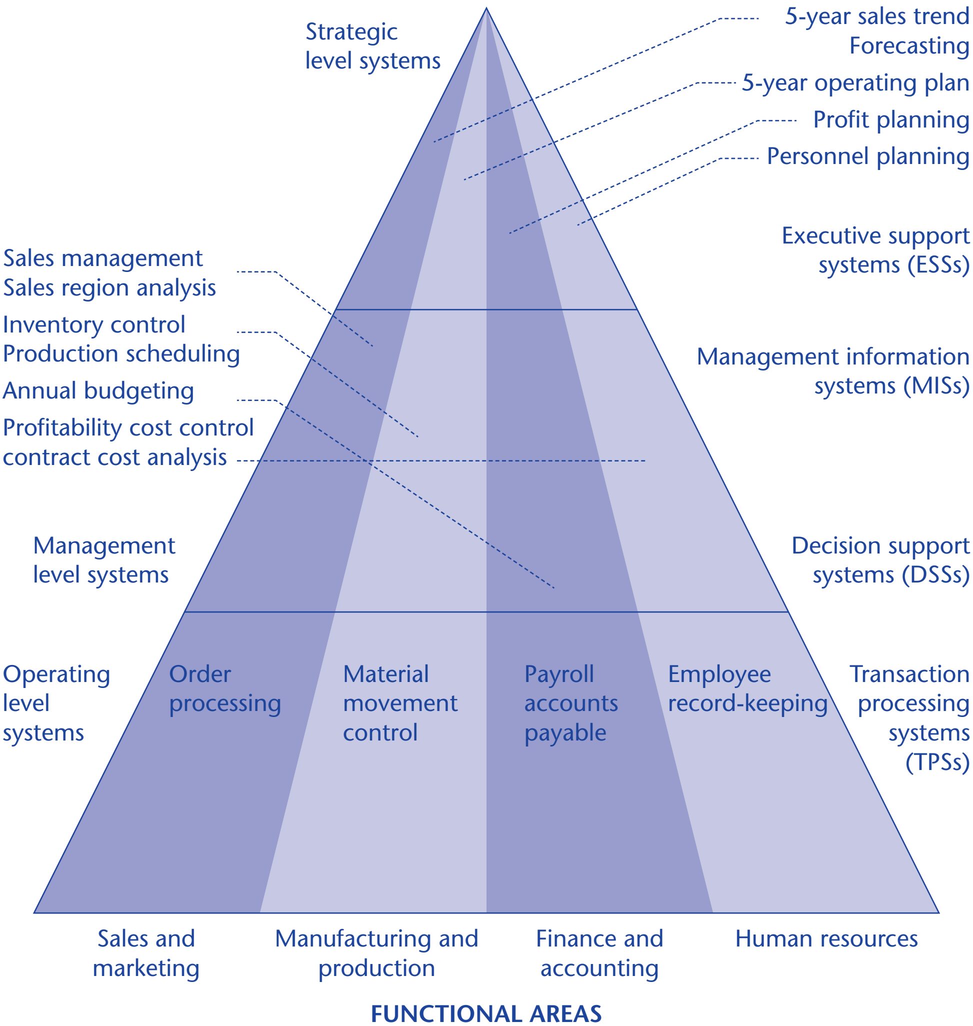

Figure 8.4: Major types of information systems

Source: Laudon & Laudon (2012)

Executive support systems (ESSs) help senior managers with their decisions. They address non-routine decisions requiring judgement, evaluation and insight, and where there are no agreed procedures for arriving at a solution. ESSs are designed to incorporate data about external events, such as new tax laws or competitors, but they also draw on summarised information from the internal MIS and DSS. ESSs are not designed primarily to solve specific problems, but rather to provide a general computing and communications capacity that can be applied to a range of ever-changing problems.

In addition to these four main types of information systems, a business can implement information systems for the various functions in the business, for example human resources, sales and marketing, manufacturing and finance.

Popular systems to implement are the supply chain management and customer relationship management systems.

Supply chain management (SCM) systems are outward-facing, focusing on helping the business manage its relationship with suppliers to optimise the planning, sourcing, manufacturing and delivery of products and services. These systems provide information to help suppliers, purchasing organisations, distributors and logistics companies coordinate, schedule and control business processes for procurement, production, inventory management and delivery of products and services.

Customer relationship management (CRM) systems focus on coordinating the processes surrounding the business's interactions with its customers in sales, marketing and service to optimise revenue, customer satisfaction and customer retention.

8.7 Knowledge management

Information has an impact on almost every activity in a business, and must be seen as an important asset. 'Knowledge management' has been adopted as a new term to describe a broad range of activities related to ensuring that a business makes the best use of its information resources.

Definition

Knowledge management can be defined as the process of identifying, collecting, storing and transforming data and information into an intellectual asset that is available to all staff members.

Knowledge management can be seen as the attempt by businesses to put procedures and technologies in place to transfer individual knowledge into databases; to filter and separate the most relevant knowledge and to organise that knowledge in databases that allow employees easy access to it or that 'push' specific knowledge to employees based on pre-specified needs.

Typically, there are two different types of knowledge within a business – explicit and tacit knowledge.

Explicit knowledge refers to processes and procedures. Explicit knowledge can be readily detailed in procedural manuals and databases, for example records of meetings between sales representatives and key customers, procedures for dealing with customer service queries and management reporting processes.

Tacit knowledge is experience on how to react to a situation when many different variables are involved. It is more difficult to encapsulate this knowledge, which often resides in the heads of employees. Techniques for sharing this knowledge include learning stories and histories. Examples include knowing how to react when changes occur in the marketplace, such as a competitor launching a new product or losing a major customer to the opposition. Knowing how to analyse and respond to information in management reports depends on tacit knowledge. Acquiring tacit knowledge may rely on sharing knowledge with partners outside the business or others in different sectors.

The important dimensions of knowledge are summarised in Table 8.4.

Table 8.4: Important dimensions of knowledge

Knowledge is an organisational asset	• Knowledge is an intangible asset • The transformation of data into useful information and knowledge requires organisational resources • Knowledge is not subject to the law of diminishing returns as are physical assets, but instead experiences network effects as its value increases as more people share it
Knowledge has different forms	• Knowledge can be either tacit or explicit • Knowledge involves know-how, craft and skill • Knowledge involves knowing how to follow procedures • Knowledge involves knowing why, not simply when, things happen
Knowledge has a location	• Knowledge is a cognitive event involving mental models and maps of individuals • There is both a social and an individual basis of knowledge • Knowledge is hard to move, situated (enmeshed in a business's culture) and contextual (works only in certain situations)
Knowledge is situational	• Knowledge is conditional: knowing when to apply a procedure is just as important as knowing the procedure (conditional) • Knowledge is related to context: you must know how to use a certain tool and under what circumstances

Source: Laudon & Laudon (2012)

Managing the knowledge in a business is beneficial to the business in many ways. We can say that knowledge management:

- fosters innovation by encouraging the free flow of ideas
- improves customer service by streamlining response time
- boosts revenues by getting products and services to market faster
- enhances employee retention rates by recognising the value of employees' knowledge and rewarding them for it

- streamlines operations and reduces costs by eliminating redundant or unnecessary processes
- preserves organisational memory by capturing and storing the lessons learnt, and best practices of key employees.

Example

An example of a knowledge management system is where a business has a database of feedback from customers and employees. This feedback gets shared with their design, and research and development departments. All the employees in the business are able to enter feedback into the database and an integrated approach is taken to understanding the shared information. Another example is if a business develops a new product, the business would conduct research on their customers. They can conduct a focus group to determine what is needed in their product or market niche. This information can then be entered into a database that contains objective data on market sales potential and indicates what assets and processes the business has in place which could be used to meet this sales potential, meet customer needs and fill gaps within the marketplace.

8.8 Summary

The information management function makes information available which is indispensable for the management of the business. The information management function also provides a service to all the other functions in the business, and provides different kinds of information to the managers on different levels. The information must be applied purposefully to assess the profitability of the business.

Information systems are developed to manage all the resources in the business. The aim of information systems must always be to support the entrepreneur in achieving their objectives. Information systems consist of six components; hardware, software, data resources, telecommunications, people and procedures. There are typically four major types of information systems in a business; transaction processing systems, decision support systems, management information systems and executive support systems.

Knowledge management refers to the intellectual assets of a business. There are two different types of knowledge; tacit and explicit.

Questions for self-evaluation

Read the following case study and answer the questions that follow.

Shoes for Africa

Shoes for Africa is a R2 million business and a leader in the lifestyle footwear industry. Shoes for Africa designs, develops and markets lifestyle footwear that appeals to men, women and children of all ages. They have more than 300 styles that meet the needs of male and female consumers across every demographic. But any shoe business could say something similar. What separates one shoe business from the other? The answer would be something to do with shoes, but in this case it is not. The answer lies in their information.

Information systems are woven into every part of Shoes for Africa's business. Its recent investment in Oracle applications, including cloud computing, demonstrates the business's commitment to information systems. The financial director, Steve Moore says: 'As we manage growth, we are establishing a business structure that lowers costs and creates more value and flexibility across the business. The cloud services help us to lighten our IT overhead and enable us to respond more quickly to market opportunities.' Therefore, it was natural that Shoes for Africa would turn to information systems to help with customer retention. In a fast-moving consumer product category like shoes, using information to understand, attract, and retain customers is even more important than having the latest technology. Many businesses use loyalty programmes to help retain customers. A car wash shop might give its customers a card that is punched every time their car gets washed. When the card has 10 punches, the customer can get a car wash for free. Loyalty programmes reduce the chances of a regular customer switching suppliers even if another shop sells a car wash for less during a promotion or offers a different advantage.

After Shoes for Africa decided to buy a loyalty programme, their challenge was this: how to design the programme for greatest sales impact? The business had to balance ease of earning reward, the value of the rewards, and other factors, so they gave away as little as possible while retaining as many loyal customers as possible. The loyalty programme that Shoes for Africa designed, planned jointly by their marketing and information systems department is called Shoes for Africa Elite. Members earn free merchandise (R10 credit for every R100 spent), free postage (if ordered in any African country other than South Africa) and enjoy special promotions. In addition, Gold members (who spend at least R750 in a month on shoes from Shoes for Africa) and Platinum members (R1 000 per month) get higher merchandise credits, sneak peeks at future products, and earn other higher benefits.

Shoes for Africa would not have been able to operate Shoes for Africa Elite without information systems. The system that supports this loyalty programme records information about members, their purchases, and the rewards they're entitled to, so members can track their participation online. In addition, the system provides Shoes for Africa's management with information about the purchase patterns of regular customers, such as shoe designs that appeal to them. The system also lets Shoes for Africa send targeted promotional materials to its best customers.

Source: Adapted from Stair et al (2014: 55–56).

1. Explain the difference between data, information and knowledge using examples from the case study.
2. Which information system application described in the case is unique to Shoes for Africa and contributed to their success?
3. Explain the type of information system used by Shoes for Africa.
4. Explain the six basic components regarding information systems. Use practical examples from Shoes for Africa.

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Public relations

CHAPTER 9

Learning outcomes

After studying this chapter, you should be able to:

- understand what is meant by public relations and be able to define public relations
- identify the objectives of public relations in the business world
- identify the various interest groups (or 'publics') and prospective businesses with which your business interacts
- evaluate the importance of public opinion
- explain how important public opinion is to a business
- distinguish between the various methods of communication
- describe what 'social responsibility' involves.

9.1 Introduction

Starting a business is all about understanding the dynamics associated with it and this does not mean only the main functions such as marketing, finance, human resources and admin. It also requires attention to be given to the major role-players in the organisation – those stakeholders who have a vested interest in the company such as shareholders, staff and financial institutions. These stakeholders are referred to as the 'publics' and interest groups that the business will come into contact with. (The term 'publics' is defined later in this chapter.)

As any successful entrepreneur knows, the business environment in which the organisation operates plays a very important role in its success and growth, and this environment consists of a number of publics or stakeholders that must be taken into consideration.

Failure to consider public opinion can lead to a business experiencing major opposition, and it may even lead to its closing down. In times when the focus is on going green and to save the planet, any company that dumps waste in rivers and causes pollution will be censured and lambasted in the media. It may even lead to the boycott of the business and its products. This could have a negative effect on its reputation and people's attitudes towards the business. Opening a bottle store close to a primary school, for example, will also lead to an outcry from parents as they will feel that the store will impact negatively on their children. The support of the publics cannot, unfortunately, be purchased along with the rest of the stock – it must be 'earned' and maintained, and it is here that public relations is involved.

Important

If managed correctly and considered thoroughly, public relations can become a strong tool in the hands of the entrepreneur. It is the responsibility of the entrepreneur to ensure that the business is run smoothly, and one of the functions that needs to be managed includes the function of public relations.

It must be remembered that the entrepreneur and their staff establish and maintain relationships with many other individuals and businesses. Public relations concerns the relationships of the business with other institutions, individuals and groups such as financiers, government organisations, customers and suppliers. The task of public relations is not exclusive to large companies, but it applies to all businesses although the level and intensity may differ.

No entrepreneur wants to lose the support of the community in which the business operates, and so the entrepreneur is dependent on the goodwill of the public or community. It is often said that a business was unsuccessful because the entrepreneur's idea of the business was not viable, when in fact, with hindsight, the reality is often that the entrepreneur did not give due attention to local interest groups through the public relations function.

9.2 Defining public relations

It is important that the place and role of public relations is understood in all businesses – no matter how big or small. It is something that is practised every day by all people and businesses. One can go so far as to say that any contact, of whatever nature, with people and businesses outside the business is a public relations endeavour. When speaking to a customer over the phone, when writing to a bank or supplier or during a meeting, the image of the business is portrayed. All such actions, in their own way, assist in marketing and projecting the business: this can be seen as the primary function of public relations.

To have proper relations with the public is not something that the business can buy, as in the case of advertising where the message to be broadcast is paid for. Whatever is published in the media, or said about the business, is usually taken at face value by the public and, therefore, has more credibility in the market than advertising.

Definition

Defining public relations is not easy, and authors do not agree as to the best definition, but we will settle for the following:

Public relations is the measured and planned actions of a business, as well as the sustained effort of the business to foster and maintain mutual understanding between the business and its various publics – both internal and external (Fourie 2015).

From this definition, the following statements are clear about public relations (Fourie 2015):

- **It is measured:** the efforts to communicate specific information to the publics are measured and clearly defined.
- **It is planned:** most large businesses have specific plans in place should a crisis arise. For example, Toyota has a plan ready in the event of the discovery of a defect involving the safety of its cars. Likewise, smaller businesses should have plans in place. For instance, if a manufacturer of dog food realises that its products have been contaminated, it should withdraw everything from the market with immediate effect, and affected clients should be compensated. Through public relations the public should be made aware that the business is concerned with the well-being of its customers and their pets and is taking all steps to remedy the situation.
- **It is sustained:** public relations is not a one-off event – it is a continuous process.
- **It is fostered:** the focus of public relations is to foster a climate of understanding between a business and its publics.
- **It is maintained:** it is no use that a positive relationship has been established if it is not kept in place or maintained. This means that the business must listen to the feedback it gets from its publics.
- **There must be a mutual understanding:** there can be no relationship if the different parties do not understand each other.
- **Publics:** by 'publics', we mean any person or group inside or outside the business that is important to the business.
- **It is internal and external:** the employees are usually regarded as the internal publics and the external publics are groups, such as customers, financial institutions, unions and media.

In simple terms, for the entrepreneur, public relations involves the relationship between the entrepreneur, the business and those people who have an interest in the business. This relationship is affected by a number of factors. These factors include the following:

- the way in which the business employs and remunerates its staff
- the attitude of the business towards the utilisation of resources
- the replacement and conservation of resources
- the quality and prices of the business's goods or services.

9.3 Objectives of public relations

In simple terms, the main objective or aim of public relations is to enhance and improve the image of the business among the various publics and to establish a healthy relationship between the business and the public. These relationships are shown diagrammatically in Figure 9.1.

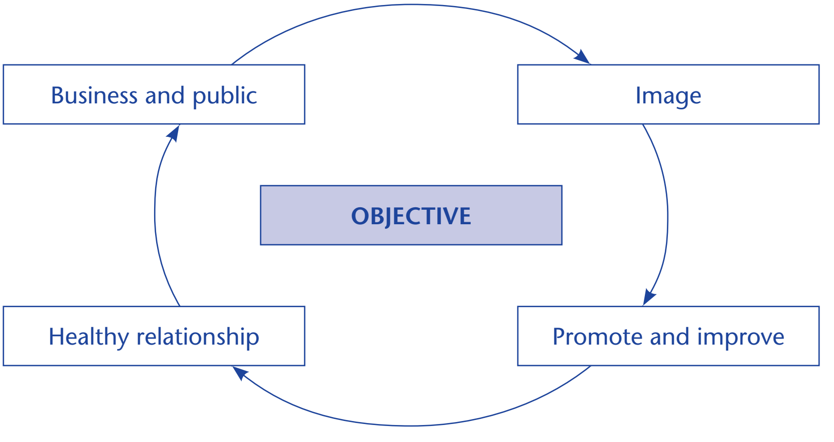

Figure 9.1: Public relations objectives

Although public relations has a simple goal – to create and maintain mutual knowledge and understanding in the business and among the public – it is a complex and important process.

It is naturally important to ensure that a good relationship (knowledge and understanding) is established between the business and the public. However, to ensure that the business succeeds and grows, this relationship must also succeed and grow. The relationship is, therefore, not just *established*, but it must also be *maintained* over time.

In general, the objectives of the public relations function can be deduced from the objectives of the business. In other words, it is important to examine what the business aims to achieve.

As we all know, the primary objective of any business is to make a profit. The achievement of this objective requires the support of various functions.

To support the primary objective of profit, therefore, each of the various functions in the business draws up certain secondary objectives, and public relations is no exception.

The secondary objectives of public relations are as follows:

- to enhance and contribute to the prosperity of the business
- to establish and expand on the goodwill among the publics that are relevant to the business.

There are many more objectives that can be set for public relations, and it is the task of the entrepreneur to ensure that these objectives are realistic, measurable and sustainable.

9.4 The different publics

Generally speaking, there are two main groups of publics for all businesses: the internal publics and the external publics (Hoffmann et al 2007). It is very important to identify the publics that are relevant to the business; failure to do so can result in an important group being overlooked, which can lead to problems at a later stage. Some of these publics are briefly discussed below.

9.4.1 Internal publics

Many businesses tend to forget that a very important public they have to be aware of is the internal public. This public is inside the business and includes supervisors, staff, managers, clerks, the board of directors and shareholders, among others.

Important

It can be argued that the internal public is the most important public, as it is comprised of the individuals who determine ultimately if a business meets its objectives or not.

If the staff are happy and their morale is high, this will project a positive image outside of the business. In order to achieve this, however, you need to communicate with the employees. In the case of a business where there are only a small number of employees, this relationship becomes even more important. Employees must know where the business is going, what its objectives are, assist with some of the decisions that are made and strive for customer satisfaction.

9.4.2 External publics

This group comprises all those publics outside the business that are important to the business. There are a number of external publics and the entrepreneur should be aware of these and the impact of their role on the business. Some of the more significant external publics are discussed below.

Consumers and customers

Without consumers or customers, a business cannot survive, and yet all too often this public is neglected. In the case of a retail store, for example, customers buy the products and then share their experiences with others; this will either generate more business or will discourage others from patronising the store. Businesses must be sensitive to issues of importance to customers, which include religion, gender and cultural matters. It is important that the business understands what customers – new and old – think about the business, its products, the atmosphere in the store or premises and its staff. A business communicates with consumers via its products, services and advertising, and should ensure, therefore, that the customer does not have an opportunity to form a negative opinion of the business. A bad experience which can damage the reputation of the business can easily end up on the internet, for example on 'Hello Peter' or in any newspaper that has sections dealing with customer complaints.

Financial institutions

Many entrepreneurs are dependent on financial institutions to finance the business or facets of it. This means that the entrepreneur must keep good relationships with the investors in the business or with the bank that has financed it. This may entail keeping the parties up to date on the financial position of the business, the strategy that is being followed and any new developments. In difficult times, such as during a recession, it means discussing problems such as a drop in turnover or negative cash flow, in order to keep investors and financial institutions up to date on the situation in the business.

Suppliers

Suppliers are important to any business as they are the source of quality products as well as useful industry information. Both parties must strive for a mutually beneficial long-term relationship.

There are a number of other parties, such as the government, local communities and the media, that are all important to the business and should, therefore, be cultivated by the entrepreneur. With increasing competition, businesses have a greater obligation towards the public today than ever before. The public is better informed than before and will no longer stand for poor treatment, incorrect information or misunderstandings simply because it is easier to remain loyal to a business.

Important

Entrepreneurs have a duty to keep their interest groups or potential customers informed so that they understand the intentions of the business. Entrepreneurs must also treat their interest groups fairly to build up a good relationship with them. In exchange, they will win a loyal public and be able to rely on their support.

The public often chooses to identify with a business that has a stated policy on an issue, such as refusing to sell pornographic magazines, rather than with one that makes no effort to establish good relations with consumers, employees and the community. For many businesses, this means learning new social skills. For instance, they should take into account what the public expects from them, and decide whether their image and conduct is favourable enough to ensure success.

Healthy relations make the product or service more acceptable to the public, and can contribute to the financial success of the business.

An uninformed public, however, can react negatively to actions taken by companies. In many instances, potentially explosive situations can be anticipated and defused by supplying the public with information beforehand on why certain things are being done. It is always better for a company to properly inform the public beforehand that a decision had been taken to, for example, discontinue the sale of certain items or products as they did not meet the required sales levels. By providing more information on positive factors, the public's attitude can be changed, and this contributes to better relations.

9.5 Shaping public opinion

One of the more difficult things to change is public perception, particularly once people have formed a certain image or idea of the business. For example, if a customer buys a certain product from a company, say an electric drill, and has to return it two or three times because it is faulty, that customer's perception will be that the store sells low-quality products and offers poor service. This may stop that person from going back to the store or from recommending it to others. People view a business in various ways. Everyone has their own opinion, and it is not always easy to convince people that they may have formed the wrong impression.

There are many perceptions of a business, which differ from person to person and institution to institution. It is also true that these perceptions are influenced by what others say, or by what they read and hear in the media. The ideal situation would be for everybody to have a good perception of a particular business, but this is unlikely. Many negative perceptions come about as a result of the actions of one or two individuals or because of particular incidents. A customer who is unhappy with the way a complaint was handled will not have a positive attitude towards the business and will more than likely share the experience with others.

In many instances, the poor impression that people have of a particular business is the result of one or two isolated incidents, but these cannot be ignored. If ignored, it is possible that a worse scenario will develop. If a business has a poor image, it should look at ways of improving it. Even so, some dissatisfied clients may still be wary and not change their attitudes. However, satisfied clients who are aware of the advantages of the products or services of the business that they support are the 'insurance policy' for the success and growth of any business.

Every business should regard its image as an asset that requires constant nurturing. This means that the entrepreneur should constantly think about the image that the business conveys to the public.

In a smaller business, the entrepreneur has the advantage of direct contact with interest groups, and will know instinctively what their needs are.

The client's opinion is usually determined through promotions and experience, but it is formed in other ways, too. In the case of shops that sell domestic items or food, for instance, the appearance of the shop, the packaging and, naturally, the quality of the products are all critical for public support of the business. For more expensive items, such as cars, washing machines and computers, the user's opinion is often formed by the after-sales service offered by the business involved.

A favourable image will determine whether:

- new staff would like to join the business
- the business has an established and growing clientele
- the media will give the business the benefit of the doubt in times of crisis.

9.5.1 How public opinion is usually formed

Various factors affect and influence the formation of public opinion towards a business (Nieuwenhuizen 2007: 246–248). These aspects are shown in Figure 9.2 and discussed below:

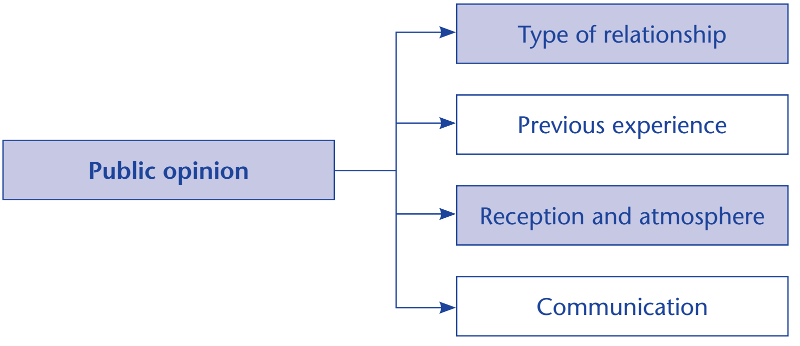

Figure 9.2: Forming public opinion

The type of relationship

The type of relationship that interest groups enjoy with the business will determine whether public opinion is favourable or not. For instance, early in 2011, the news that Shell intended to explore gas deposits in the Karoo, led to a huge outcry and protests from the public. There were even calls for a boycott of Shell's products. If the response from the business is not one that satisfies customers, it can lead to a negative reaction from the market, which may impact on the business in the long term. By reacting in a responsible manner, the business can avoid such a reaction.

Previous experience of specific transactions with the business

The most important advertisement for a business is when consumers share their good experiences with one another: this is called 'word of mouth'. If consumers are satisfied with the service or product offered and therefore have a good opinion of the business, they will tell other people. However, people tend to talk more about negative experiences than about positive ones, so the opinion of others can also be very damaging. Every time a customer has contact with the business, they have the chance to form an opinion – this is called the 'moment of truth'. It is possible that just one slip-up will undo all that has been built up over time.

Reception area and atmosphere in the business

Although most businesses have a reception area, clients or customers are also received in other offices and in entertainment areas. All employees have contact to a greater or lesser extent with visitors and must, therefore, be informed about the way in which they should receive them. The right behaviour is very important: it affects the attitude of the public towards the business.

A neat entrance area and a friendly receptionist and atmosphere will have a positive effect on any potential customer or client.

Communication

Communication by the business, such as telephone calls, letters or personal contact, is always a sign of what it really thinks of its clients. Table 9.1 outlines the means of communication that need to be managed by the business:

Table 9.1: Means of communication to be managed by the business

Telephone	A good telephone manner means that both caller and receiver will react positively. Switchboard operators in particular must have good voice techniques that promote positive feelings and convey a positive image of the business.
Letters and documents	All written communication with clients must be clear and correct and convey a positive image of the enterprise. Remember, when clients do not actually visit the business themselves, written communication is probably the only way to remind them of it.
Personal contact	Personal contact is very important in determining whether the business is successful or not. The following pointers may be useful: • know the public • give customers a lot of attention • treat everyone equally • be helpful and friendly • acknowledge mistakes made by the business • apologise for mistakes and correct errors.

9.6 Methods of communication

Public relations is a two-way process, consisting of both sending and receiving messages. The business communicates with the public to introduce a new service or product, and receives feedback information from the public in the form of suggestions, complaints and opinions.

Definition

Communication remains the most basic method of promotion for a business. Communication allows a business to identify, contact and persuade customers to buy a product or service.

A smaller business will usually not be able to afford media advertising and must, therefore, use other methods of promotion. The following are a few examples:

- the use of informal networking mechanisms. This is where friends and acquaintances tell each other and other people about the business;
- involving local media to visit the business if something newsworthy happens, such as a new process or inviting journalists from the local newspaper to the grand opening of the business;
- writing and submitting a press release or photographs to the media for consideration for publication. The key here is that the piece submitted must be relevant and newsworthy and not just an attempt to get cheap publicity.

When projecting an image, the entrepreneur should consider using a variety of methods to distinguish their business from similar businesses. Assume, for instance, that you have a home industry retail outlet in a shopping complex which contains another similar shop. To distinguish your shop from the other outlet, you could consider converting part of your shop into a coffee bar where customers can enjoy coffee and a piece of cake. The appearance of the outlet can also be used to attract the attention of prospective customers.

It is also important to join organisations and associations, such as the local Chamber of Commerce, where networking can take place with people who have an interest in your business. In this way you can build up valuable contacts.

9.6.1 Public relations campaigns

Smaller businesses or entrepreneurs are not in a position to compete directly with larger businesses on the public relations playing field. What is important, however, is that the entrepreneur utilises public relations opportunities for the best possible benefit of their business.

There are a number of types of public relations campaigns, with different objectives. A campaign can, for instance, be planned with the aim of merely informing target publics about an issue, or creating awareness about a cause.

Alternatively, a campaign can be aimed at persuading publics to change their attitudes; in the same way, a campaign can be employed to educate the market/ public on a specific issue.

These are all general objectives, but specific campaigns will have more specific objectives.

Theaker identifies six types of public relations campaigns (Theaker 2008). These are:

1. the public awareness campaign, which, as the name indicates, aims to create awareness for something. This might be a specific cause or event that the business is promoting
2. the information awareness campaign, which covers both awareness and information regarding something
3. the public education campaign, which educates the market about something, for example road safety or saving electricity
4. campaigns aimed at reinforcing the attitudes and behaviour of the market
5. campaigns aimed at modifying the behaviour of the publics
6. campaigns aimed at changing the attitudes of the market or publics.

Any campaign moves through stages and changes are made as the campaign evolves. It is important that the campaign convinces the public to align or identify themselves with the business or ideas addressed.

There are five functional stages in a public relations campaign, as identified by Rensburg and Cant (2009: 201–202):

1. **Identification stage.** The business or idea must have some sort of identification such as a logo or corporate colours.
2. **Legitimacy stage.** The business needs to establish legitimacy. This can be done in a number of ways. The business may, for example, show it cares for the homeless by indicating that it is donating food to the shelters in the area or spearheading a drive to collect donations from people.
3. **Participation stage.** The business in this stage attempts to involve those who were previously not involved.
4. **Penetration stage.** This is realised once those at whom it is aimed become aware of the cause.
5. **Distribution stage.** This stage shows the target publics that action will be delivered. In this stage, the business needs to show that it is living up to its promises.

No matter what the size of the business, it is important that these stages be addressed. In this way it can be expected that results will be obtained.

There are various public relations processes that can be followed; one of the commonly used, standard models is the Cutlip, Center and Broom 4-step process (Broom 2013).

9.6.2 The four-step public relations process

These steps include the following (Rensburg & Cant 2009: 208):

1. **Define the problem or opportunity.** This step will require research regarding opinions, attitudes, behaviour, and so on. This phase answers the question of what is happening now.
2. **Planning and programming.** In this phase, key decisions must be made as to what should be done, and why.
3. **Taking action and communicating.** This phase answers the question of how it should be done and how it must be communicated.
4. **Evaluating the campaign.** It is important that the effectiveness of the campaign be evaluated. This answers the question of how well you did.

9.7 Social responsibility

According to Theaker (2008: 145), the term 'social responsibility' implies that a business is motivated by more than just self-interest and it is an activity that aims to promote the interests of society at large. All entrepreneurs have a social responsibility towards the people who contribute to their success. It is useful to follow the principle that, by helping others, you help yourself. The responsibility is not limited to the environment within which the business trades, but it also includes employees of the business.

9.7.1 Employees

A good workforce is necessary to keep the business functioning. It is, therefore, paramount that the employer creates the right supportive climate in the business to satisfy employees' needs and to ensure that they perform as well as possible. One way to achieve this is by granting financial study aid to children of employees, or to employees themselves. This will, in turn, contribute indirectly to an improvement in work performance.

It is also important that the employer allows employees to participate in decision-making processes, provides training, allows them to acquire skills and motivates them. A well-informed workforce is happier and more loyal than uninformed staff. They have greater enthusiasm for the objectives of the business for which they work because they understand that their personal success depends on the success of the business.

9.7.2 The environment

Most businesses in South Africa have begun to see that they can make an important contribution to better social, ecological and aesthetic environments, which will benefit not only their employees, but also the inhabitants of their area and the country as a whole. These contributions might include support for nature and environmental conservation activities, or for anti-pollution campaigns.

When it comes to financial donations, it is usually a good idea to 'donate what you can afford'. Examples of donations are bursary allocations to the dependants of employees, allocations to educational institutions, sponsorships or facilities that are made available to employees.

Important

If a business fails to fulfil its social responsibilities or damages the environment, it becomes a threat to society and the environment and may lose support.

A business remains dependent on the community for support. If entrepreneurs make promises which they later fail to fulfil, they can advertise as much as they want, but not much will change the poor image that they have created for themselves. However, the better the image of a business, the greater will be the support from the public.

9.8 What does public relations involve?

Public relations involves a number of functions (Hoffmann et al 2007: 53). These categories don't necessarily describe specific jobs or tasks. Often, someone charged with the public relations activities in a firm will be responsible for several of the tasks. These public relations functions are summarised in the sections that follow.

9.8.1 Promoting goodwill

The need for goodwill is vitally important to businesses that are dependent on support from the community, such as charities or foundations. Businesses that rely on the public for licensing or authorisation to purchase equipment or build new facilities also depend on goodwill.

9.8.2 Releasing information to the public

Many a business has come undone by not releasing the correct information on time. If a product made by a small business is found to have a defect that could harm the environment, and the business does not take action or stays quiet about it, there could be a negative impact on the business's customers when the details become known. Managing the release of information in the event of a crisis is part of the job of the public relations person, or the responsibility of the entrepreneur if they do not have somebody to do this. The timely release of accurate information is often crucial.

9.8.3 Creating or reinforcing an image

There is no direct product pitch here, but publicity does serve a purpose: it reinforces a particular trait that the business would like the public to be aware of – its image.

9.8.4 Directly promoting a product or service

This can best be described by means of an example.

Example

One enterprising businessman who sold a book designed to keep household records did very well using a press release describing the product. The press release was his only sales tool. Most of his press releases were sent to women's magazines. Although only a fraction of the magazines ran the release as a story, a couple mentioned the item in the 'new product news' sections. This assured the business of a profitable number of orders.

But don't always expect a press release to work this well!

9.8.5 Counteracting negative publicity

Most businesses will face adverse press at some time or other. When the worst happens, the public relations person, or the entrepreneur, will be in charge of damage control. The function of public relations in this case will be to present the story in the best possible light. It is important to note that this does not mean covering up what has happened.

9.8.6 Handling internal communications

Internal communication is vital for all businesses.

Employee newsletters, or other in-house publications, are a good example of internal communications. The goal of most such newsletters is to create a feeling of goodwill and solidarity among employees or members of a business. The theory is that higher morale will increase productivity. Another important function of internal newsletters is to inform workers of the business's policies.

9.8.7 Promoting and planning events

Promoting events can be as simple as issuing a press release describing the event and giving the time and date. Achieving press coverage is one obvious benefit for an event. Another subtler benefit involves the sense of identification people acquire after attending an event.

9.9 A PR checklist

No business can standardise its PR approach, and there is no magic formula for figuring out what kinds of PR you need. The following checklist will help the entrepreneur determine what they want and what other people will want from them. It is a good idea to sit down with some of the staff and go through this list.

The questions that you should ask yourself are listed below.

1. Do you want local publicity, regional publicity, national publicity, or a little of each?

A hunting lodge, for instance, would benefit from regional and national publicity, but local publicity is unlikely to be of any help in increasing customers. Most locals will know of the lodge, and if they haven't already patronised it, they probably never will.

2. Is it important that we reach a certain group?

The entrepreneur will want information about their hunting lodge to reach hunters in other localities, rather than simply reaching locals. They might be very interested in placing a press release in the leisure and outdoor sections of the newspapers in cities all over the country.

3. How important is goodwill to us?

Goodwill never hurts, but pursuing it is more important to some businesses than to others.

4. What kind of information do we want to communicate?

Another consideration is, 'How will it help us?' Colleges are keen to show that their faculties are accomplishing great things. Oil companies wish to communicate the idea that they are friends of the environment. On the other hand, businesses that depend on membership will focus on the benefits of being a member.

5. Are there specific programmes or services that we want to emphasise?

Security companies, for example, may want to emphasise their armed guards, or risk-analysis assessments.

6. To whom must our work ultimately appeal?

This requires some careful thought and depends on the business's particular requirements. For the entrepreneur, it may be his or her banker.

7. Are we trying to offset a bad image?

This is usually the reason why someone is suddenly assigned the job of public relations. Often, however, no one is willing to come right out and admit it in so many words.

8. Is it more important for me to do a good job, or to prove that I'm doing a good job?

Everybody spends a little time proving how well the job is being done, but in some cases it is more important than others. Find out what the situation is from the start and you won't have to spend time mopping up later.

9. Do people confuse us with another business?

Confusion with another business is a common reason for a business to embark on some image-building. This is especially true where a business has suffered negative publicity.

9.10 **Summary**

In order for a business to capitalise on the benefits of public relations as a marketing tool, the entrepreneur must be aware of the advantages it offers and how it can best be utilised. As you have seen from this chapter, the entrepreneur is dependent on people and their goodwill.

It is important not to confuse public relations with advertising or the marketing function. Marketing or advertising is concerned mainly with a particular product or service, while public relations is a process as a result of which the entire business is made acceptable to the various interest groups. Effectively, therefore, public relations 'sells' the business to the public.

Questions for self-evaluation

1. Define what public relations is, and indicate what you understand about the various components of public relations.
2. Briefly describe the primary objective of your business or a business that you might establish. The secondary objectives of the public relations function should be in support of your business objective. Name and discuss the relevant secondary objectives of the public relations function to your business.
3. What do you understand about the publics of a business?
4. As an entrepreneur whose business is manufacturing and marketing health foods, who would you regard as your internal publics, and who as your external publics? Discuss in detail.
5. Public opinion is influenced by various factors. Name and discuss these factors as they relate to your business.
6. Using your business as an example, discuss how you would approach the different stages of a public relations campaign.
7. Discuss the concept of social responsibility and how it can be applied by your business.

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Index

Page numbers in *italics* indicate figures and tables; where these fall within a page range they have not been indexed separately. Page numbers in bold indicate definitions. The index is in letter-by-letter order.